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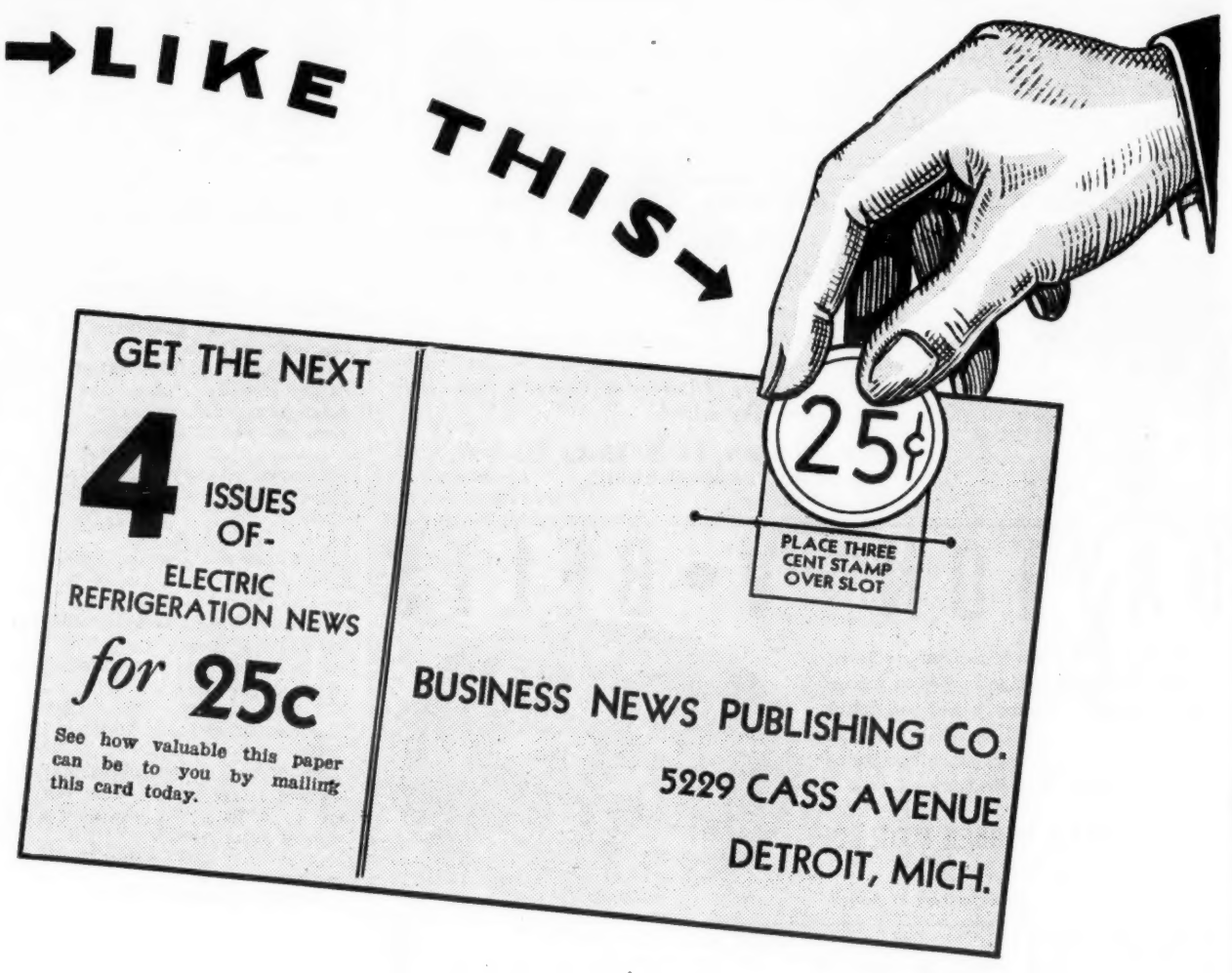
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which ALL DEALERS AND SALESMEN NEED

TO START THE 1935 SELLING SEASON *right!*

1. MARCH 20

SPECIFICATIONS FOR 1935
HOUSEHOLD ELECTRIC REFRIGERATORS

These specifications will be complete, including types of systems; capacities, dimensions, prices, cabinet construction details; machine construction details, types of controls, makes of parts and materials used; special features, etc.

2. MARCH 27

SPECIFICATIONS FOR 1935
AIR-CONDITIONING EQUIPMENT

This issue will contain full specifications—types of systems, capacities, prices, machine construction details, makes of motors, controls, and parts; refrigerant used, special features, etc.

3. APRIL 3

SPECIFICATIONS FOR COMMERCIAL
REFRIGERATION EQUIPMENT

Full specifications, including types of systems; sizes, capacities, and functions performed; construction details, makes of parts and materials used.

4. APRIL 10

HOW TO SELL
ELECTRIC REFRIGERATORS IN 1935

This will include the best selling ideas of the principal manufacturers of electric refrigerators and will be invaluable to distributors, dealers, and salesmen.

SPECIFICATIONS

Everybody wants specifications. Every dealer and salesman needs this data. Comparative facts and figures about *every model* of *every make* of household and commercial refrigeration and air-conditioning equipment.

Don't go into the 1935 selling season unprepared. Know your own product and that of your competitors. Be ready to answer the questions of your prospects intelligently. It will cost you only 25 cents.

Important note: While the schedule is arranged so that specifications for household electric refrigerators, commercial refrigeration, and air-conditioning equipment will be concentrated in different issues, it is quite possible that all manufacturers will not be able to comply with the schedule. It will therefore be advisable to obtain all four issues even though you may be interested in only one type of equipment.

Furthermore, the fourth issue of the series will be the big *selling help* number. In this number the editors will invite the leading manufacturers to "take the stage" and tell "*how to sell*" their products. In all four issues, advertisers will give the "reasons why" that salesmen need when talking to their prospects.

50,000 coin cards are now being distributed. Let us know how many you need for the members of your organization. Rush your orders for extra copies of these four issues. The price is 25 cents per set, no discounts for quantities. Remember that the press run must be determined in advance and when the supply is gone, *its gone.*

Business News Publishing Co., 5229 Cass Ave., Detroit

THE NEWSPAPER OF THE INDUSTRY

ELECTRIC REFRIGERATION NEWS

WRITTEN TO BE READ ON ARRIVAL

Registered U. S. Patent Office

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Kelvinator Has Larger Line of Air Conditioners

6 Self-Contained, 7 Floor & 12 Suspended-Type Units Developed

By Phil B. Redeker

DETROIT—Kelvinator Corp. this week is introducing to its dealers the 1935 line of Kelvinator air-conditioning equipment, a much more comprehensive line of air-conditioning equipment than Kelvinator has ever offered before.

The line consists of self-contained conditioners, floor-type cabinet conditioners, suspended units, and 16 condensing units ranging from ½ to 20 hp. and especially designed for air-conditioning work.

There are six self-contained models, seven floor-type conditioners, and 12 suspended-type units in the 1935 line.

Two series of models are included in the self-contained line. One series is comprised of "controlled temperature and humidity" direct expansion units, which provide controlled relative humidity by special internal arrangement of the cooling coils in conjunction with a humidistat. The other series of units provides temperature control only, and have thermostatic control.

Self-contained models have a capacity range of from .55 to 1.6 tons of refrigeration employing a two-cylinder compressor located in the bottom of the cabinet.

All coils for cooling or dehumidifying are of the continuous tube type. The coils are especially designed and

(*Concluded on Page 21, Column 1*)

74 Air Conditioners Sold in Cincinnati

By T. T. Quinn

CINCINNATI—The 74 air-conditioning installations here during 1934 came within one of equaling the total made in all previous years, according to a survey completed recently by the Union Gas & Electric Co., local utility.

The city now has 149 air-conditioning systems employing refrigeration in operation.

Biggest increase, in point of number, was in private homes. Twenty-five installations were reported last year alone, while previous to 1934 only 14 were in use.

Most notable gain, however, was in the application of air-conditioning in the city's small stores. Where prior to 1934 but five systemn were in use, with a total connected hp. of 45.5, last year 10 installations were reported in buildings of this type, with a total of 221 connected hp.

Another sizeable increase in Cincinnati's use of air-conditioning equipment was in offices throughout the

(*Concluded on Page 20, Column 5*)

Masters Named Sales Manager of Lipman

BELOIT, Wis.—F. D. Masters, formerly with the Majestic organization, has been appointed general sales manager of the General Refrigeration Sales Co., manufacturer of Lipman equipment. He took over his new duties March 6.

Mr. Masters was with Majestic first as a district manager and later as departmental sales manager. Previous to this time, he was associated for 12 years with a manufacturer of equipment which was sold direct to dealers.

Hines Co. Will Move to Larger Quarters

BALTIMORE—The Hines Co., distributor for General Electric refrigerators and G-E line of major appliances, will move to new and larger quarters at 507 North Howard St., reports Dorsey Hines, president.

Temporary sales and showrooms are being maintained at 531 N. Howard St., since the recent fire which badly damaged the offices previously occupied at 521 Howard.

Sales Manager

J. K. KNIGHTON
Former Frigidaire executive has been appointed sales manager of Kelvinator air conditioners.

Kansas City Code on Trade-Ins Revised

KANSAS CITY—The Electric and Radio Association of Kansas City has revised its electric refrigeration code for the greater Kansas City area to include an allowance of $2.50 for ice boxes taken in on refrigerators selling up to $155, and a provision that trade-in boxes must be picked up by the dealer making the sale.

The full code agreement now includes the following maximum trade-in allowance on ice boxes:

On refrigerators selling up to $155, $2.50; from $155 to $225, $5; from $225 to $285, $7.50; from $285 up, $10.

Other code provisions are:

Ice boxes taken on a trade-in basis must be picked up.

No cash discounts will be given to domestic users.

The minimum monthly carrying charge is set at one-half of 1 per cent on the deferred balance at the time of purchase.

Dealers who have subscribed to the code provisions are:

C. A. Alber Hardware Co., Apex

(*Concluded on Page 24, Column 2*)

Cabinet Styled, Unit Refined on 1935 Copelands

4 Models Introduced in Conservatively Styled Truscon Cabinets

DETROIT — New cabinets and refinements in the refrigerating mechanism mark the 1935 line of household electric refrigerators now being introduced by Copeland Refrigeration Corp., a division of Dallas E. Winslow, Inc.

Factory f.o.b. list prices on the new line are: 4.5-cu. ft. model, $114; 5.5-cu. ft. model, $170; 6.6-cu. ft. model, $193; 8.8-cu. ft. model, $228.

The new cabinets are manufactured by Truscon and are conservatively styled, with smooth lines, rounded edges, and integral legs which have curved openings for the housewife's broom. A new nameplate of distinctive type adds to the cabinet's appearance. A stainless steel strip marks the place where the body of the cabinet and the top meet.

Refinements in the refrigerating mechanism cover a variety of parts. An improved balanced bellows seal is being used, which is claimed to reduce friction and to make for quieter operation.

A reed-type discharge valve is be-

(*Concluded on Page 2, Column 3*)

Cole Submits Plan Of Reorganization

NEW YORK CITY—Rex Cole, Inc., distributor of General Electric household appliances here, has filed an application in the United States Court for the southern district of New York, seeking to reorganize under Section 77B of the Federal Corporate Reorganization Law.

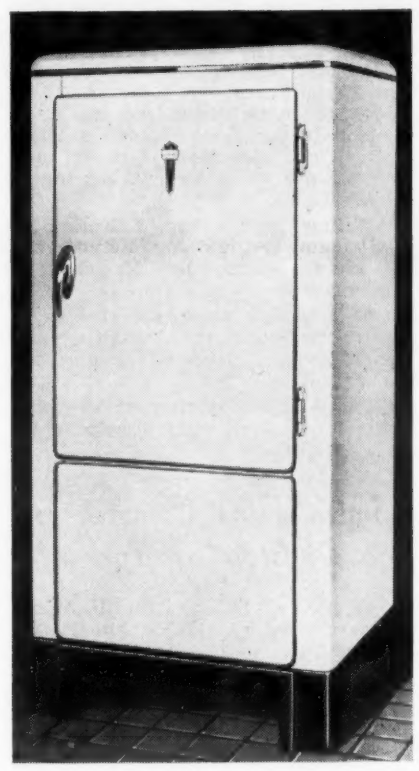
Mr. Cole, in a statement issued at the time the petition was filed, said he planned to eliminate central display rooms in his territory, which comprises New York City, Long Island, Fairfield County, Conn., and the Hudson river counties as far north as Ulster.

Hearing on the petition is set for April 5, at which time it is expected the new plan for the organization

New Floor-Type Conditioner

Kelvinator's new floor-type air conditioner gets final approval from J. A. Harlan, manager of the commercial division; Vice President H. G. Perkins; President George Mason; and J. K. Knighton, air-conditioning sales manager. Details of new conditioners will be found in column 1.

New Copeland



Copeland's 1935 household models are featured by conservatively-styled cabinets and refinements in refrigeration mechanism.

Macy Still Selling Kelvinators & Frigidaires

By George F. Taubeneck

NEW YORK CITY—Still selling for 6 per cent less than the standard retail price, R. H. Macy & Co., New York's cash-policy department store, is offering Frigidaire, Kelvinator, Leonard, and Macy electric refrigerators for sale in its housewares department.

Frigidaire and Kelvinator refrigerators are bootlegged into the Macy store, according to officials of both the Frigidaire and Kelvinator corporations, who declare that Macy's store does not have the franchise for either brand.

An expose of the methods by which Macy's obtains these bootleg refrigerators was published in the March 13 issue of the NEWS.

Priced regularly at $99.50, a 1935 Frigidaire 3½-cu. ft. box is being offered at $93.50. Larger Frigidaire and Kelvinator boxes are being offered at $112—each model priced for Macy's at exactly 6 per cent less than the established retail figure.

When asked how Macy's was able to sell these refrigerators for less than branches of the two corporations were able to offer them in New York City, the Macy salesmen replied, smoothly and with tip-of-the-tongue readiness:

"Macy's tremendous buying power

(*Concluded on Page 2, Column 2*)

Stewart-Warner Dealers Convene

PHILADELPHIA—The 1935 line of Stewart-Warner electric refrigerators, radios, washers, and Kleen-Heet oil burners was shown to dealers in the Philadelphia area at a meeting sponsored by Philadelphia Distributors, Inc., in the Bellevue-Stratford hotel here.

The meeting was in charge of Albert E. Hughes, vice president and sales manager, and was opened with an address by Harry A. Ellis, president of the distributorship.

Stewart-Warner officials who spoke at the meeting included William Steinwedell, secretary and treasurer; J. N. Golten, service manager; Allen Dicus, sales promotion manager; and Louis K. Roth, eastern representative.

Mr. Dicus, discussing the company's advertising plans for 1935, pointed out the Stewart-Warner series of broadcasts over an NBC hookup, twice weekly for 48 weeks, and outlined an additional projected magazine, newspaper, and billboard campaign.

Coil Men Left In Quandry by NRA Officials

Administrator Demands Code but Fails to Attend Meeting

By George F. Taubeneck

CHICAGO, March 19—(Special Wire to ELECTRIC REFRIGERATION NEWS)—Nathan Hale may have had his troubles as the Man Without A Country, but his problems were relatively simple when compared with the tribulations of the finned coil manufacturing business — the Industry Without A Code.

Representatives of this industry labored through an all-day session at the Hotel Stevens here today with the intent of producing a rough draft of a basic code for their group. When they finally adjourned, they were no further along than when they had started.

Uncertainty engendered by the NRA organization (or lack of organization!) may be blamed for the failure of the finned coil industry to get anywhere on its proposed code.

In the first place, the promised NRA representative failed to arrive for the sessions, even though the meeting had practically been commanded by NRA officials.

In the second place, several of the manufacturing factors in the commercial refrigeration coil business did not send representatives, supposedly because of their feelings that the whole NRA program is on the way out, anyhow.

So without guidance from Washington and without true industry representation, the group had little authority or incentive to do anything of a permanent nature.

With regard to the NRA, the commercial coil industry finds itself in a puzzling predicament. About 18 months ago, when the initial Blue Eagle push got underway, these manufacturers formed an association and drew up a proposed code.

This code went as far as a final hearing at which it was rejected by NRA officials on the grounds that the association was not truly representative of the industry. NRA officials then suggested that finned coil manufacturers make application for recognition under the Heat Exchange Institute.

They did, Blue Eagle insignia arrived, and everything was apparently fine and dandy. Bills for "code administration costs" were even mailed to these manufacturers and before learning of the mistake, Fedders paid one such bill. Then at a meeting Jan. 25 last, these befuddled manufacturers were told by F. B. Combier of the NRA that they had never been admitted to the Heat Exchange Institute, and that they had better

(*Concluded on Page 2, Column 1*)

Guy Supervises Utility Sales for Westinghouse

MANSFIELD—New utilities supervisor of Westinghouse Electric & Mfg. Co.'s refrigeration department is C. H. Guy, whose appointment was announced recently by P. Y. Danley, manager of the department. Mr. Guy will take over his duties at once, with headquarters here.

He will have charge of the promotion and development of refrigeration business through public utilities throughout the United States.

Mr. Guy has had several years' experience in sales work for electrical appliances, and has handled public utility contact work on electric refrigeration. Previous to his work with public utility interests, he was engaged in building sales organizations for electrical merchandising in Pittsburgh and Boston.

Dealer in Town of 1,000 Sells 169 Units in 1934

HAMPTON, Ga.—In this town of 1,002 people in a county with 1,800 white families, Cain's Pharmacy, Crosley dealer here, sold 169 Crosley electric refrigerators during 1934.

SPECIFICATIONS OF 281 HOUSEHOLD REFRIGERATORS IN THIS ISSUE

NRA Officials Leave Coil Men in Quandry

(*Concluded from Page 1, Column 5*)

hurry up and get themselves a code.

"We've had our eyes on you fellows," the finned coil manufacturers were told, "and all we've got to say is that you'd better hurry up and pass a code or one will be passed for you."

To Washington went a committee composed of H. J. Krackowizer, president of Refrigeration Appliances, Inc., Chicago; W. F. Armstrong of Frigidaire Corp., Dayton; and C. T. Bappler of Bush Mfg. Co., Hartford, Conn. These gentlemen met with Mr. Combier and were advised to call immediately an industry meeting for the purpose of preparing a basic code. An NRA official would attend, it was declared.

So the meeting was called, but no NRA official appeared. Nor was a quorum of the industry present. The finned coil manufacturing industry still doesn't know where it stands with regard to the NRA.

Those who attended today's meeting were: Mr. Krackowizer; James W. Hatch and C. T. Bappler, Bush Mfg. Co., Hartford, Conn.; R. C. Colman, McQuay, Inc., Minneapolis; H. G. Rieckelman, Fedders Mfg. Co., Buffalo; Stuart Bruce McNaught, general counsel for Refrigerating Machinery Industry Code Authority, York, Pa.; W. H. Schleck, Young Radiator Co., Racine, Wis.; A. T. Marlo and T. A. McGurn, Marlo Coil Co., St. Louis; R. W. Kritzer, Peerless Ice Machine Co., Chicago; Charles Oppe, G & O Mfg. Co., New Haven, Conn.; Morrill Dunn, McCord Radiator & Mfg. Co., Detroit; M. P. Fugle, Larkin Refrigerating Corp., Chicago; and G. F. Taubeneck, editor of ELECTRIC REFRIGERATION NEWS, Detroit.

Macy's Continue Sale Of Kelvinators & Frigidaires

(*Concluded from Page 1, Column 4*)

always enables this store to obtain merchandise at better prices than other retailers."

"Where do you get these Frigidaires and Kelvinators?" asked the reporter.

"Why, directly from the factory," replied the salesman.

Attempts were made to switch prospects' interest from other makes to the Macy refrigerator (manufactured by Liberty in Providence, R. I.) which, size for size, sells for less than the Frigidaires, Kelvinators, and Leonards (notwithstanding the 6 per cent reductions on these standard makes) on the floor. Lowest price Macy model was a 4-cu. ft. box tagged at $89.50.

All four makes are delivered, installed, and serviced for one year free of extra charge by Macy's own organization.

One Leonard chest model was on the floor, but the salesman steered the reporter "prospect" away from it, saying:

"You don't want that dinky thing. It hasn't enough food storage space for a pet cat."

Smith Joins Commercial Division of York

YORK, Pa.—H. A. C. Smith, former representative of the Larkin Refrigerating Corp. in the Northwest territory, has joined the Commercial division of York Ice Machinery Corp. here.

New Copeland Line Includes 4 Models

(*Concluded from Page 1, Column 3*)

ing used this year. Motors in the 1935 models are rubber mounted.

The new models are fitted with Penn Switch controls. The control used on the '35 Copelands have a thermal overload cutout, the start-stop button showing a red band when it kicks out. The control has a vacation setting and 9-point temperature control.

A change has been made in the placement of the interior electric light this year; it is placed behind the control panel which is located above the evaporator, and the actuating arm protrudes through the control panel.

Cabinet interior on the new Copelands are devoid of frills. Provision is made for bottle storage, the evaporator is porcelain clad, and ice cube trays on the two largest models have chrome-plated handles.

Methyl chloride is the refrigerant used. All compressors are driven by a 1/6-hp. motor with the exception of the largest model, which is driven by a 1/5-hp. motor.

Model 505 makes 63 ice cubes at a freezing, models 635 and 755 make 84 ice cubes at a freezing, and model 955 makes 112 ice cubes at a freezing.

Crosley Shipments Gain During February

CINCINNATI—Shipments of Crosley electric refrigerators for February were 56.7 per cent greater than those for the same month last year, according to Vice President Lewis M. Crosley.

Number of Crosley employees now exceeds 3,500, Mr. Crosley said.

G-E's Brand New Baby

Little brother to General Electric's famed Monitor Top this year is the Balltop, a new unit of 4-cu. ft. capacity with the same mechanical features which characterize the larger Monitor Top model. Miss Rosabelle Rogers (left) and Mrs. Erma Black of the sales promotion division of the specialty appliance sales department, are having a look at the new "baby."

RCA Report Traces Television Progress During Past Year

NEW YORK CITY — Substantial progress was made during the year 1934 in the development of facsimile transmission by radio and of television, according to the annual report to the stockholders of Radio Corporation of America.

"Facsimile transmission," reads the RCA report, "has been employed experimentally for some months in the reception aboard ship of weather maps, pictures, and other information useful and interesting to navigators and passengers. This new system of communication may also find application in police work, for the transmission between cities of photographs, fingerprints, and other records. A page of business letter size can be transmitted within a few minutes.

Facsimile Circuit

"It is expected that the high-speed, ultra-short wave facsimile circuit between New York and Philadelphia, referred to in last year's report, will be placed in service during the present year.

"Progress in facsimile transmission has reached a stage where communication by the square-inch, instead of the traditional Morse code method of dots and dashes on a word basis, has been achieved and demonstrated on an experimental basis. This development promises new point-to-point communication services, and new broadcast services to the home, of pictures, printed matter and other visual material."

Research Continued

The corporation has continued research in the field of ultra-short waves and in the technique of visual transmission and reception. Viewed from the standpoint of public service, conclusions reached by the RCA are "that sound broadcasting and sound receiving equipment comprise the fundamental broadcasting and receiving facilities of the nation, with television facilities as a supplementary service; that there are no short cuts to the inauguration of television; that it must proceed step by step through the processes of research, laboratory development, field demonstration and thence to regular service; and that the technical, program, and financial problems involved are so great as to make it impractical to erect and maintain a system of television on a nation-wide basis, particularly in the United States, in the present state of the art.

British Commission Report

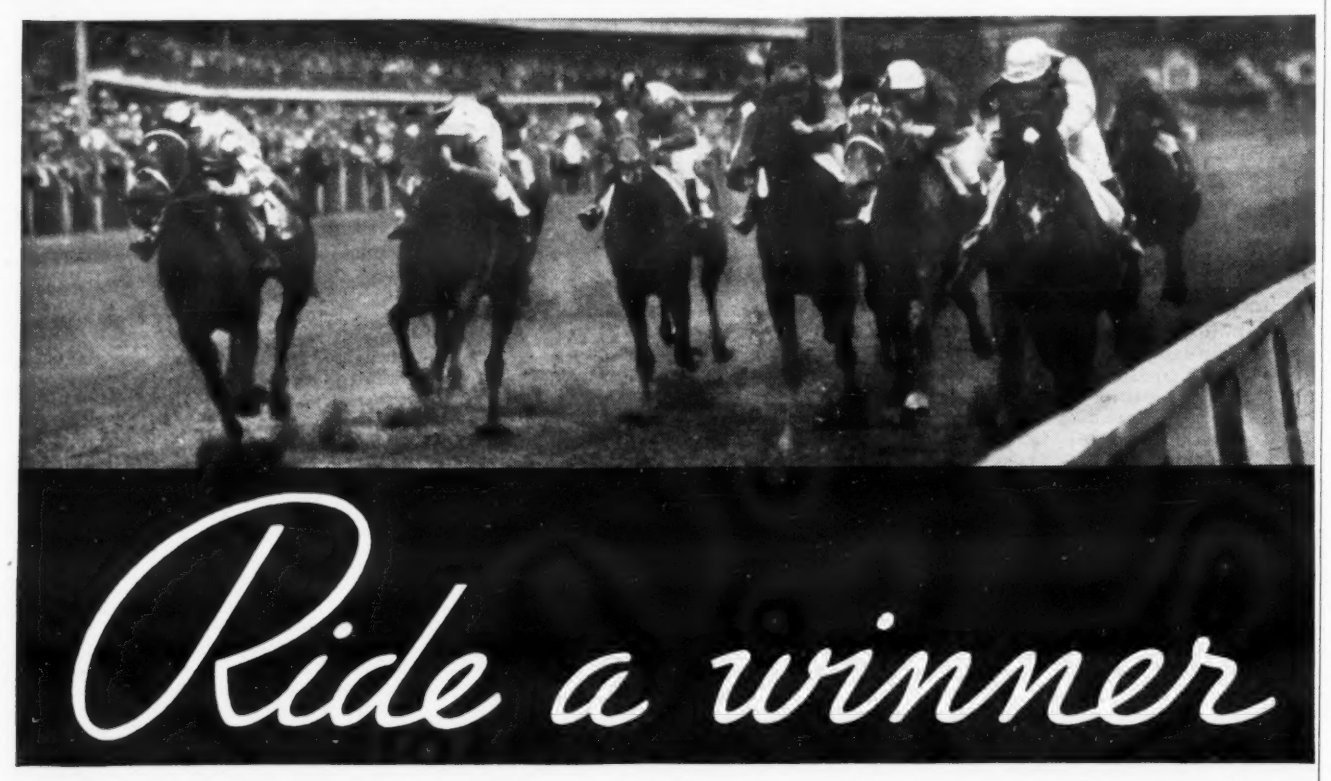
"The report of the British Commission which recently recommended the establishment of an experimental television station in England, states that transmission difficulties 'may seriously limit the extent to which the country can be effectively covered' and 'that the area capable of being effectively covered by ultra-short wave stations of about 10 kilowatts capacity will not exceed a radius of approximately 25 miles over moderately undulating country.'

"The cost of this experiment at a single location in London is estimated to be approximately $900,000. For a service limited to half the population of England, it is stated that probably ten transmitting stations at suitable locations would have to be erected, and that 'some time is likely to elapse before the price of an efficient receiver will be comparable with that of the average type of sound receiver.'

Problems in United States

"With England occupying a territory not much larger than that of New York state alone," the RCA report continues, "the vastly greater problems of television service for the United States are self-evident. The present wire systems are not suitable for interconnecting television stations as they are for broadcasting stations. For that purpose either a new wire system must be created or radio relays must be further developed and established.

"In view of these facts," RCA concludes, "it is apparent that the next step in the development of the art in the United States must begin with the establishment of television on the basis of field demonstration in order that subsequent plans may be founded on the practical experience thus obtained."



Leonard is Going Places!

If you're looking for a refrigeration franchise you can bank on . . . consider Leonard's 54 year old reputation for dependability. Leonard dealers *stay* with Leonard. And Leonard stays with them.

And if you want fast sales and generous profits . . . consider Leonard's ever increasing popularity that has set new sales records straight across the country.

Big Things Ahead

Now in 1935 Leonard is headed for still greater success. With 14 new models—ranging in price and size to meet every sales requirement. With an array of convenience features seldom found in a single refrigerator. Features which have earned for Leonard the title of the "complete" refrigerator.

All this, *plus* a new and remarkable Sales Plan that delivers interested prospects in large numbers *right into dealers' stores!* Even in small towns, too. In one town of only 23,000 population it brought 409 women into the Leonard dealer's display room on a specified day. It drew 125 to another dealer's store in a town of only 3,600. And from coast to coast reports of similar results poured in—month after month.

This tested, proved money-making plan is again being used by Leonard dealers . . . short-cutting the way to quicker, easier Leonard sales. And in addition the services of Leonard's own finance company are available to all qualified Leonard dealers.

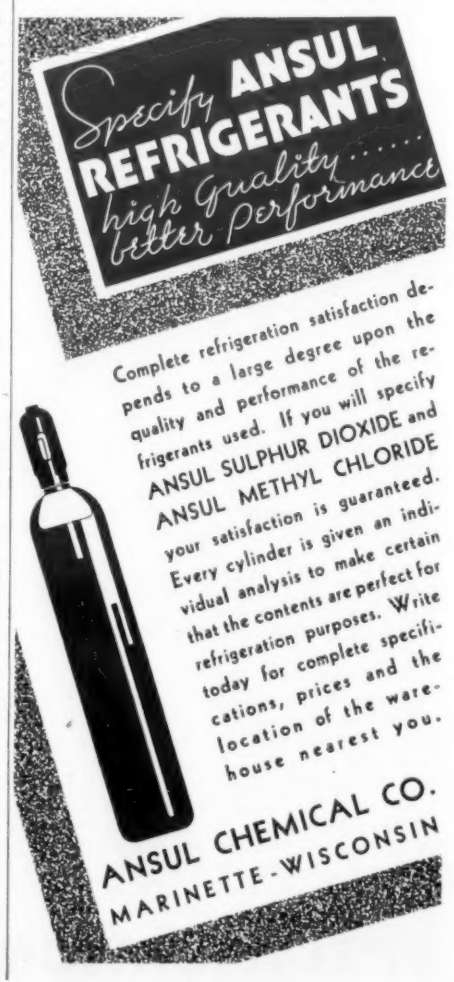
Get Franchise Facts

Can you afford *not* to know more about Leonard—the refrigeration line that's the talk of the industry? Then wire or write today for franchise facts. . . . LEONARD REFRIGERATOR COMPANY, *14256 Plymouth Road, Detroit, Mich., and London, Ont., Canada.*

LEONARD

THE *COMPLETE* REFRIGERATOR

(779)


Specify ANSUL REFRIGERANTS
high quality
better performance
Complete refrigeration satisfaction depends to a large degree upon the quality and performance of the refrigerants used. If you will specify ANSUL SULPHUR DIOXIDE and ANSUL METHYL CHLORIDE your satisfaction is guaranteed. Every cylinder is given an individual analysis to make certain that the contents are perfect for refrigeration purposes. Write today for complete specifications, prices and the location of the warehouse nearest you.
ANSUL CHEMICAL CO.
MARINETTE-WISCONSIN

Enthusiasm is running high

FOLLOWING FRIGIDAIRE'S NATIONAL CONVENTION

★

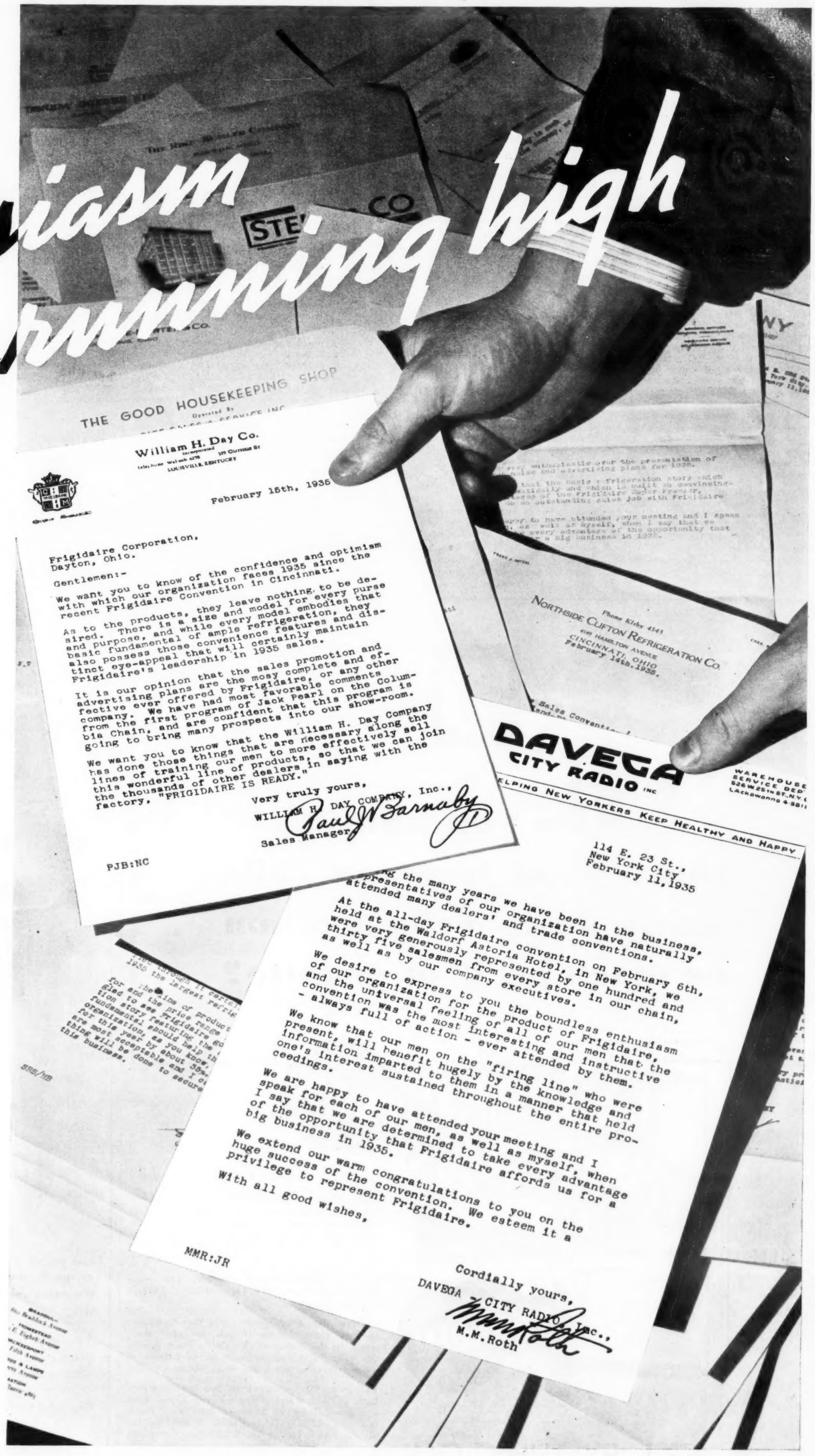
DEALERS HAIL THE FRIGIDAIRE SUPER FREEZER AS THE GREATEST SALES PRODUCER IN YEARS

Enthusiastic reports are rolling in from Frigidaire dealers. And everywhere the verdict is the same. Dealers acclaim the Super Freezer as one of Frigidaire's greatest developments—*a development that can be relied upon to bring in business.*

And this enthusiasm is not based merely upon expectations. It is based upon definite, tangible results—*sales that are being made right now.* Even before the season has fairly started, the Frigidaire '35 is moving into homes in numbers that leave no doubt about what this year holds for Frigidaire dealers.

The Frigidaire household line for 1935 is one of the most complete we have ever offered. There are 16 models. Some with Dulux exteriors and porcelain interiors. Some with Lifetime Porcelain inside and out. And every model from the smallest to the largest has the Super Freezer!

The Frigidaire franchise for 1935 gives you a real line and a real product to sell. And back of that line and that product we're putting the weight of one of the most impressive advertising campaigns in Frigidaire history. Shall we send you complete information? Frigidaire Corporation, Subsidiary of General Motors Corporation, Dayton, Ohio.


THE GOOD HOUSEKEEPING SHOP
William H. Day Co.
LOUISVILLE, KENTUCKY
February 15th, 1935
Frigidaire Corporation,
Dayton, Ohio.
Gentlemen:-
We want you to know of the confidence and optimism with which our organization faces 1935 since the recent Frigidaire Convention in Cincinnati.
As to the products, they leave nothing to be desired. There is a size and model for every purse and purpose, and while every model embodies that basic fundamental of ample refrigeration, they also possess those convenience features and distinct eye-appeal that will certainly maintain Frigidaire's leadership in 1935 sales.
It is our opinion that the sales promotion and advertising plans are the mosy complete and effective ever offered by Frigidaire, or any other company. We have had most favorable comments from the first program of Jack Pearl on the Columbia Chain, and are confident that this program is going to bring many prospects into our show-room.
We want you to know that the William H. Day Company has done those things that are necessary along the lines of training our men to more effectively sell this wonderful line of products, so that we can join the thousands of other dealers in saying with the factory, "FRIGIDAIRE IS READY."
Very truly yours,
WILLIAM H. DAY COMPANY, Inc.,
Paul J. Barnaby
Sales Manager
PJB:NC
NORTHSIDE CLIFTON REFRIGERATION CO.
4149 HAMILTON AVENUE
CINCINNATI, OHIO
February 14th, 1935.
DAVEGA CITY RADIO INC
HELPING NEW YORKERS KEEP HEALTHY AND HAPPY
114 E. 23 St.,
New York City
February 11, 1935
During the many years we have been in the business, representatives of our organization have naturally attended many dealers' and trade conventions.
At the all-day Frigidaire convention on February 6th, held at the Waldorf Astoria Hotel, in New York, we were very generously represented by one hundred and thirty five salesmen from every store in our chain, as well as by our company executives.
We desire to express to you the boundless enthusiasm of our organization for the product of Frigidaire, and the universal feeling of all of our men that the convention was the most interesting and instructive - always full of action - ever attended by them.
We know that our men on the "firing line" who were present, will benefit hugely by the knowledge and information imparted to them in a manner that held one's interest sustained throughout the entire proceedings.
We are happy to have attended your meeting and I speak for each of our men, as well as myself, when I say that we are determined to take every advantage of the opportunity that Frigidaire affords us for a big business in 1935.
We extend our warm congratulations to you on the huge success of the convention. We esteem it a privilege to represent Frigidaire.
With all good wishes,
Cordially yours,
DAVEGA CITY RADIO Inc.,
M.M. Roth
MMR:JR

FRIGIDAIRE '35

THE GENERAL MOTORS REFRIGERATOR

PERSONALITIES

By George F. Taubeneck

You'll Meet the Gang At Jack Dempsey's

Lots of interesting people were around to be seen and listened to last week in New York City.

That's not news. Nor is it particularly newsworthy to state that among the interesting men we talked with (at a good Waldorf-Astoria luncheon) were General Electric's T. K. QUINN, vice president, and P. B. ZIMMERMAN, manager of the specialty appliance sales department.

Biggest excitement around New York City these days seems to be JACK DEMPSEY'S new restaurant. Backed by some of the important money behind the Hollywood Restaurant (where Rudy Vallee holds forth, at $5,000 per week), the former world's heavyweight champion boxer has opened a new restaurant and bar across the street from Madison Square Garden, New York's No. 1 indoor sports arena.

Jack Dempsey's has become the vogue in New York City today. That's the place to go, at present, if you want to see everybody who is anybody.

First person we bumped into on our initial visit was FRED ALLEN, prime radio comic. Then came MERLIN AYLESWORTH, president of the National Broadcasting Co., and former manager of the now-defunct National Electric Light Association.

In the bemirrored and polished Little Bar was REX COLE, New York City G-E distributor, setting 'em up for a group of friends. And there, at the entrance to the main dining room, was JACK DEMPSEY himself.

From the vantage point of the doorway one reason for the restaurant's popularity soon become apparent. Dempsey has become a sort of legendary idol, and hero-worship can be cashed in on, if you know how.

Men would come shoving their way through the long queue of customers standing in line for tables, leading half a dozen friends with them, clap Dempsey on the back, pump his arm, and shout:

"Jack, I want you to meet Art, here, and Phil, and Mrs. Kliegenbaum, and Stella, and Rosie Sussman. Folks, this is my old pal, Jack Dempsey.

"Rosie, don't you want Jack to autograph something? Here, take my fountain pen. Sure, Jack's always willin' to do anything for ME."

Whereupon Jack would obligingly autograph the back of an old envelope, or a paper napkin, and would assure his Old Pal that he'd get a table right away.

Old Pal had brought in six customers to bask in the reflected limelight of his friendship for Dempsey. And there seem to be scads of Old Pals, each bringing into the restaurant an entourage of customers.

But the patronage wasn't limited to parties brought by somebody who shook hands with Dempsey at Joe's Place back in 1921. Others would press forward in the line, grab partners by the hand, and point excitedly:

"See? There's Dempsey! Right there talking to that fat bald-headed man. Yes, sir. That's Dempsey himself."

At the long bar in the front of the establishment you will see more beer-hoisters in action at one time than you'll find anywhere else in New York.

On Repeal Night the writer was riding peaceably in a Pullman car, so we missed the excitement. But we've seen flashlight pictures of New York City bars that night.

Well, that's how Dempsey's long bar generally appears—three or four deep, they stand, hollering for another stein.

* * *

Frick Refrigeration

In the big dining room the first thing you notice is a well-lighted, glass-enclosured display of meats, refrigerated by two wall-type unit coolers.

Around the sides of the room are small booths, and above the booths are framed photographs of business, sports, and theatrical celebrities. The rest of the space is filled with tables for People Who Once Knew Dempsey.

Refrigeration for the meat display, for wine and beer cooling, for the kitchen larder, and for the air-conditioning system is being installed by the Automatic Refrigeration Co. It's all Frick equipment.

An engineer took us on a personally conducted tour of the place, from roof to basement (to which we gained access by lowering ourselves through an 18-inch hole) to see the equipment which has already been installed.

In the next issue we'll have a technical description of the systems.

New Deal Lawyer Likes His Ice Cubes

After our last visit to Washington, D. C., there appeared on this page a little impressionistic sketch of HENRY WALLACE, Secretary of Agriculture in the Roosevelt Cabinet.

It wasn't our notion that the sketch was exactly flattering. For instance, it was observed that this noted critic of the present distribution of wealth is whisked about Washington in a Cadillac big enough to provide quarters for a dealer's morning sales meeting.

A New York reader, however, wrote in to protest against our writing anything at all about Secretary Wallace, whose ideas are a bit too "Russianish" to suit this reader (see "Letters" department in the Jan. 2, 1935, issue).

At the risk of offending Mr. J. HALL TRUMAN, JR., again, we're going to tell you about another New Dealer. This one we met (somewhat by accident) in New York City last week, and had dinner with him. He shares with us—maybe that's one reason why we like him—a fondness for good, stout horseradish with roast beef.

His name is OLIN C. CASTLE, he is a lawyer from Houston, Tex., and he is chairman of the Section of Car Pooling under the Federal Coordinator of Transportation, JOSEPH B. EASTMAN.

Mr. Castle, a long-time railroad lawyer in the Southwest, is middle-aged, gray-haired, and a pretty substantial citizen. He is just about as unradical and un-Red as anyone you can imagine. Even Mr. Hearst would probably approve of him.

We tried to inveigle him into an argument about the TVA, but Mr. Castle wouldn't be inveigled. Had enough problems of his own, he said, without worrying about Dave Lilienthal and the latter's tribulations.

He did tell us, though, about his son Ted. It seems that Ted isn't exactly friendly toward the idea of electric refrigeration.

TED CASTLE, according to his father, is engaged in making a survey of the ice industry in Boston. After the survey has been finished, Boston ice interests will be in a position to allocate and limit production intelligently, thus avoiding the overproduction and price wars which have plagued the ice business in some sections of the country.

It makes Ted run a temperature every time he visits his father down in Washington and sees the electric refrigerator in the Castle establishment there.

Over and over he has told his father the story of natural circulation, dehydration, and drainpipe odor elimination, but Mr. Castle has just smiled and said that Mrs. C. likes the convenience of electric refrigeration, while he himself likes ice cubes.

Not long ago the Castles gave a little party. At the beginning of the evening Ted confidently predicted that the ice cube supply would run out, and that at last he could convince his father of the merits of artificial ice in 100-lb. cakes.

But, chuckles Mr. Castle, the darned refrigerator made ice cubes all evening just as fast as they could use 'em up.

Some of these New Dealers (forgive us, Mr. Truman) aren't such bad guys, after all.

* * *

Not Sherbet; Sharbet!

JIM IRWIN, director of inner and outer public relations for Frigidaire Corp. and occasional publicist for General Motors, was at one time a regular heller of a newspaper man.

At the indeed-tender age of 21 Irwin was snatched by Publisher WILLIAM RANDOLPH HEARST from a Madison, Wis., newspaper and made city editor of the *Chicago Herald and Examiner*.

That surprised Jim just about as much as it surprised the boys on the *Her-Ex*. But Jim seemed to have a flair for catching the eye of "sensational" publishers. After Jim had labored for a year or so on the *Her-Ex*, Publisher FREDERICK G. BONFILS of the famous Denver *Post* (Bonfils was canonized by GENE FOWLER in "Timberline") took him away from Hearst and made him his first assistant.

There's more to tell. Anyway, you should get the idea from all this that Jim is no slouch of a newspaperman, even if he is doing publicity now. So when we're able to scoop him on his own territory, that's fun.

One evening in New York City we happened onto a young fellow by the name of DEL SHARBET. It happens that he is the announcer for Frigidaire's new radio program, and that he is quite a story in himself.

Thus far Mr. Irwin's publicity on the Frigidaire radio program has been concentrated on two old standbys, JACK PEARL and CLIFF "SHARLEE" HALL, and one newcomer, PATTI CHAPIN. So we're

(*Concluded on Page 6, Column 1*)

Do you know that 3/8" of frost on coils slows down refrigeration as much as 3" of granite?

LISTEN:
Set your radio dials for the Sparton program with Jolly Coburn, Sundays, 4:00-4:30 P. M. EST; N.B.C. Blue Network.

There's no doubt about this being a Sparton year. The new Extra-Feature Sparton refrigerator has everything it takes to make a sale—*and make it easily*. The Antifrost Electric Clock has great sales appeal. Every other refrigerator on the market relies upon the owner to defrost it. Consequently, very often frost starts caking and refrigeration slows down and electricity bills go up. Sparton is AUTOMATIC. Defrosts itself—properly and regularly. Saves up to 30% in electricity. There's a great sales story.

Sparton also offers housewives the Baskador, another extra feature which provides shelf space on the inside of the door. Then there's the Vegabin—a compartment at the bottom of the refrigerator for bulky food storage.

Things are happening with Sparton dealers—both in Radio and Refrigeration. Think over the possibilities of Sparton—but don't think too long—it may be too late. Write now for all the facts. The Sparks-Withington Company, Jackson, Michigan. Sparton of Canada, Ltd., London, Ontario.

SELL BY THE CLOCK

SPARTON

THE EXTRA-FEATURE REFRIGERATOR

COPELAND

The Signature of Quality

Copeland Household Refrigerators for 1935 are carefully planned to meet the demand for dependable refrigeration at modest prices.

Everything the housewife needs in refrigeration is provided in the new models now rolling off the production lines.

Beautiful, easily cleaned lacquer cabinets . . . Maximum storage space, Porcelain interiors . . . Scientific arrangement of shelves . . . Plenty of ice-cube capacity . . . Bottom mounted units . . . Semi-concealed hardware . . . flat tops . . . Nine freezing speeds . . . quiet mechanism . . . Inexpensive operation, and, a suitable size for every family.

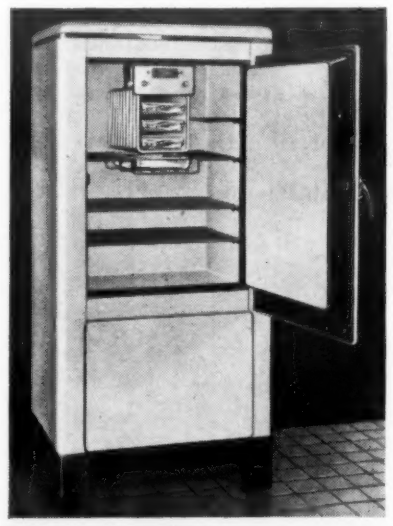
List prices are made low enough to produce volume sales and discounts are extremely attractive.

This new line embodies all the benefits of skilled engineering, veteran experience, modern production facilities and ample financial backing.

A few good territories still available. Phone, write or wire for details.

Copeland Refrigeration Corporation

Manufacturers of a complete line of Domestic and Commercial Refrigeration
Holden Ave. at Lincoln, Detroit
Division of Dallas E. Winslow, Inc.



Domestic Models in 4.5, 5.5, 6.6 & 8.8 cu. ft. net storage space.
This is model No. 755, 6.6 cu. ft.

The Most Sensational New Patent in Electric Refrigeration!

. . . brings bigger profit opportunities to Refrigerator Dealers

Dealers throughout the United States have shown an overwhelming preference for the new Fairbanks-Morse refrigerator. Three months ago, we did not have a single dealer. Today, we have dealers in every important town from coast to coast!

Dealers saw and bought the new Fairbanks-Morse because of the exclusive new CONSERVADOR—the most amazing money-saving patent in electric refrigeration!

They saw in the CONSERVADOR a new feature that would lessen sales resistance. They knew that every housewife would prefer it because of its saving in time! In food! In electricity! In space! In money—year after year!

Most important, these dealers realized that the CONSERVADOR had tremendous sales possibilities. Its remarkable money-saving advantages are obvious to everybody. Women can see it. They can understand it. That's why it's so easy to sell. Why it offers greater profit opportunities!

Get in on the ground floor *now!* The Fairbanks-Morse franchise is the most valuable dealer arrangement offered for 1935! Write, phone or wire for complete information and name of nearest distributor. Fairbanks-Morse Home Appliances, Inc., 430 South Green Street, Chicago.

Cable Address: **FAIRMORSE, CHICAGO**

FAIRBANKS-MORSE *Refrigerators*

RADIOS-WASHING MACHINES-IRONERS

105 YEARS OF PROGRESS IN PRECISION MANUFACTURING

PERSONALITIES

(*Concluded from Page 4, Column 5*)

glad to tell him and all other good Frigidairemen about DEL SHARBET.

At the age of 25, this smooth-spoken young fella has become something of a sensation around New York City radio circles. He has been in the Big City, less than a year, yet he has landed no less than *ten* commercial programs. Which, the old-timers will admit, is something of a record.

In addition, he has composed two new songs which are shortly to be published. No doubt PATTI CHAPIN will sing them on a forthcoming Frigidaire program.

Sharbet—he will remind you several times that it isn't "Sherbet"—started out in life as an orchestra leader. That couldn't have been long ago, because it was just after he left college. But people liked the way he announced the selections, it seemed, better than the way his band played them.

In fact, they like his announcing so much better than his directing that they began to write letters about it. And in no time at all he was a full-fledged announcer at the NBC studios in Chicago.

From there it was but a couple of roundly-rolled vowels and a sharply-tongued consonant or two until he was in New York and its Radio City. And now, by golly, success!

Mr. Sharbet, coincidentally comes from Texas—Fort Worth, to be more specifically geographical. He didn't know the New Deal's Mr. Castle—mentioned previously—nor, do we suppose, would Mr. Castle have heard of young Sharbet.

So (in case either or both should happen to read this), Mr. Castle, permit us to present a fellow Texan: Mr. Sharbet.

Also, Mr. Irwin: Mr. Sharbet.

Ole King Cole Gets into Print Again

When REX COLE, the No. 1 G-E distributor, calls for his salesmen to gather round, it isn't at the dinner or luncheon table that they meet. It's at breakfast, and the hour is 7:30. "Then they'll go out and sell," explains Mr. Cole. "After dinner they'd go home."

If Rex Cole played football or bridge he'd be elected, or nominated or otherwise designated The All-American Something-or-other, but he happens to sell refrigerators and electrical appliances, and so a large part of the country at large probably does not know that Rex Cole, Inc., claims to be the largest distributing medium for electric refrigerators and other appliances in the world. Old readers of this paper ought to know it, though.

Because of the phenomenal record of having sold 250,000 electric refrigerators and other appliances, representing a gross return of about $50,000,000, during the past seven years; because of the unique methods he uses to get such results from his organization; and because business men in and out of the industry are discussing the man and wanting to know more about him, two publications, *Esquire* and *Opportunity*, recently assigned crack reporters to get Mr. Cole's story.

Perhaps you read these two articles last month. If you haven't our digest may prove to be interesting.

General Electric once asked him to sit in on a conference. Objective: the selection of a distributor for the New York Metropolitan Area. When he left the meeting, Mr. Cole returned to New York as General Electric Specialty Appliance Distributor for the New York Area, and he's been on the job ever since.

In an interview with Lyne S. Metcalfe, published in the March issue of *Opportunity*, Mr. Cole reveals some of the conclusions he has reached after many years of successful selling.

"In their desire to get business in times when sales come none too easy for any one, our men, as is probably the case with the men of many other concerns, were spending some of their valuable selling time on people who cannot and should not make such an investment at present.

"And, being conscious of the fact that there are still tens of thousands of families in our territory who *can* and should buy our appliances—as is the case all over the country—we are introducing a little 'game'—you might call it—into our selling organization which might be called 'picking the prospect.'

"Never before has the public been more receptive to innovations in the form of new comforts, economies and conveniences offered by American manufacturers, but the fact remains that, under present conditions, a vast number of families are not in the market.

"They are not in the market for the simple reason that they cannot make the necessary investment, economical as it may be in the long run, and we think that it is advisable to set them aside for follow-up as times continue to grow better.

* * *

Selective Selling

"We think that, in the meantime, the salesman can utilize his full time on those prospects who *can* buy, and if he must spend a large portion of it discovering *who* they are, it is better spent in that way than in trying to heckle impossible, immediate prospects into signing on the dotted line," believes Mr. Cole.

"The best salesman today is the accomplished, 'sharp-shooter' type. The sharp-shooter picks his man. He takes careful aim, and he knows what he is aiming at. The old idea of "mass firing'—coverage—which characterized selling of years gone by is not suited to the immediate present nor the immediate future.

"It is true that 'mass firing' and machine gun tactics, to borrow an example from the Army, and as applied to selling—had its advantages when nearly every one had money and the buying urge. But tactics must change in selling as they change in war, and as conditions make changes necessary.

"Isn't it more profitable, in the long run, to spend two hours out of eight finding out who is and who is not a possible prospect than to spend those two hours trying to close a person who simply cannot buy now?

This question, says Mr. Metcalfe, is one to which Mr. Cole expects his salesmen to find their own answers.

* * *

'Mechanical Terms Are Out'—Cole

"The time is gone when a mass of vague and high-sounding mechanical facts will sell goods," insists the New York G-E distributor.

"Electrical goods now have a broad public acceptance. So that salesmanship, at least in our line, consists largely of finding the right people to call on and then intelligently showing them the needs and advantages of buying.

"From what I can see this rule holds pretty much through large specialty sales organizations everywhere.

"It has been my practice to get up early in the morning and visit our branches, dropping in unannounced before the salesmen go out, and mix with them. I know that does a world of good.

"I can chat with them individually—man to man—and there is no trace of formality about these meetings. We may chat at a deskside or seated on the edge of a showroom table. They can tell me their troubles and problems and sometimes I can help them. I nearly always feel that I can encourage those who need it, and set them right when they are wrong in their thinking."

* * *

How Rex Appears To His Best Friends

More intimately revealing its the article by Paul W. Kearney in the February issue of *Esquire*, in which he quotes several friends of Mr. Cole, who are themselves well known men. For instance, Bruce Barton is the source of the following:

"When the first market crash came he (Cole) was in a rolling chair on the Atlantic City board-walk when a bellboy handed him a telegram with the news that he'd been cleaned out of fifty thousand shares of holdings. 'Oh, my!' he said. That was the only squawk any human being ever heard him make about it.

"That night he threw the biggest party of his life at the hotel, giving notes for the check—and not a guest there dreamed that their care-free host had gone flat broke that morning.

"In a month he was on the way back again, but starting from the top, not the bottom. Took the New York territory for the G-E refrigerator; plastered the town with advertising; big showroom designed by Ray Hood; striking white enamel delivery trucks, and all that.

"In two years he had a force of 600 which presently grew to a thousand. And the warmest-hearted human in the city became the synonym for refrigeration!

"Runs his business like a fire chief. Day and night chauffeur; never five feet from a telephone and never out of touch with his office no matter where he is or what else is engaging him, yet he is the town's best host.

"He can throw as dizzy an all-night party as anybody you could name—and still appear at one of his famous seven-thirty 'sales breakfasts' with enough pep left over to send 5,000 salesmen out on a mad selling orgy that will last three weeks."

* * *

Largest Capacity For Friendship

Mr. Kearney interviewed Frank Mason, Vice President, National Broadcasting Co., to get this slant on Mr. Cole.

"Rex Cole? The fellow with the largest capacity for friendship I've ever seen: the kind everybody instinctively turns to in a jam and who invariably has the solution they overlooked. And no noise—no fuss and feathers—none of that Great I Am domination.

"For instance: a friend of his gets smashed up in an automobile crash and is carried off to the hospital. Rex calls up to inquire—has trouble getting her—in a half hour there's a telephone installed at the bedside on his orders.

"Later he went out and scoured neighborhood of his office until he rounded up 30 different kinds of puzzles. Had the clerks wrap each one individually and send them so she'd get a new one each day.

"And you don't have to be sick to get service from him. The wife of one of his friends sent him two lampshades one time and asked him to see that they were re-covered properly!

"Mrs. This calls him up to find out where is the best place to rent a saddle horse—Mrs. That phones him for help in getting theater tickets, and so on. I never saw a big man who could do so many little things for people as he does.

"Once they slapped him into a hospital himself. His first order was for two telephones to be installed so he could keep in touch with his business: his second, for a case of Scotch—hospitality for his friends, mind you, because he isn't a drinker himself.

"However, the phones kept him so busy that he forgot to tell any of his friends where he was and it was five days before the news leaked out. Then everybody in town from the mayor down began to flock in until the place soon took on the appearance of Grand Central on a football Saturday.

"Each new arrival, dashing madly into what might be the man's deathbed for all they knew, found the crowded room full of cigarette smoke and two private nurses running themselves ragged fetching more White Rock, shaking up highballs, passing smokes, and generally providing a nice Ritz Bar touch to the sick room!

"'But, Mr. Cole,' the nurse would wail, 'Doctor says you must rest—you must eat—you must sleep—.'

"'Lissen,' Rex would break in, 'you go get a couple of porters like a good girl and take these flowers around to people who haven't any. As for the doctor, he knows I sleep in the winter. And as for you,' turning back to a mournful subordinate, 'you say there's no business? My God, man; look out of that window—look at those apartment houses, every one losing tenants. And they're not going to get new tenants until they rejuvenate those places—bring them up-to-date—redecorate them—put in electric refrigeration. Hells bells, I could jump out of any window in this building and land on fifty thousand dollars worth of business. Gimme that telephone!'"

* * *

Quoting 'Deak' Aylesworth of NBC

H. M. Aylesworth, President, National Broadcasting Co., supplies Mr. Kearney with these notes on the subject of Rex Cole:

"Rex Cole has more friends who'd go through hell for him than anybody I ever knew. And why? Because he sells himself personally exactly as he sells his product: on service. You hear a lot of twaddle under the heading in business, but I tell you, Kearney, Rex lives it whether the person on the receiving end is a customer or a personal friend.

'In selling he works on a much broader program than merely taking orders. He starts by studying his product in all its phases—no doubt he could build a refrigerator himself if he had to, and certainly there's no part of a repair job he can't do.

"With that he combines a real appreciation of the ultimate buyer's expectations of what he buys to the end that the prospect doesn't become just a consignee but a life-long friend of Rex Cole's product.

"Furthermore, he sells an idea, not a piece of merchandise. When he came to New York 20 years ago as the inventor of the Duplexelite, he saturated this market with a swell fixture—but he never sold fixtures, he sold lighting, And he knew lighting, frontwards and backwards.

"Today he isn't selling refrigeration, but the electric kitchen—and he knows every angle of that subject—so well, indeed, that he opened a cafeteria for his employees which sells a fine lunch for twenty cents or so and still breaks even.

"He's more than a salesman—he's an evangelist. And believe me, they come from all over this country to talk to him, to attend his salesman's training school, to find out how. And well they may.

"They'll benefit, of course, but none will ever match him because none of them have the capacity for it."

* * *

No More Showrooms

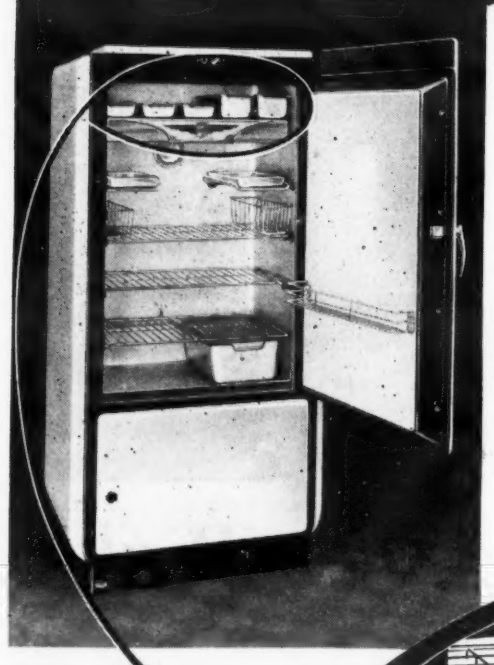
As you will read on page 1 of this issue, Rex Cole is reorganizing under the new Federal Corporate Readjustment Act. The big reason for this move is the opportunity it gives him for breaking a flock of bothersome leases.

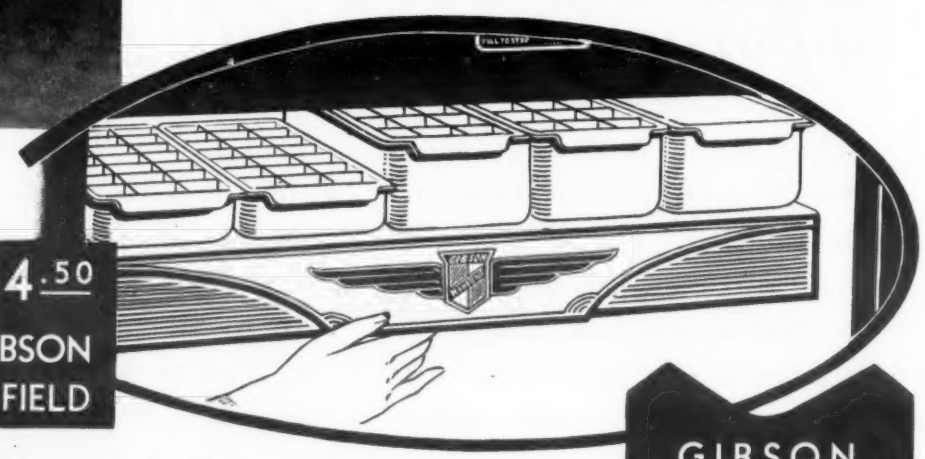
Back in 1929 (of all times!) Rex started out in his Grand Manner to dot Greater New York's crowded landscape with novel showrooms for G-E appliances. He did a swell job of it, as you may well imagine.

But today the picture has changed (see editorial on page 14 of this issue). And Rex Cole, always ahead or abreast of the times, is changing his set-up to meet the new conditions.

SUCCESS! and HOW!

The NEW GIBSON MAGIC Freez'r Shelf IS CLICKING!





$79.50 TO $254.50
with only *five models* GIBSON
covers the VOLUME FIELD

From coast to coast the enthusiasm of the Gibson Dealer Organization is up to a fever pitch. The excitement runs high, and dealer acceptance for the 1935 models is such that orders are pouring in with every mail and new distributing outlets being made every day.

The GIBSON 1935 models are an unqualified success. GIBSON Style, Features and Prices have impressed the public so favorably that Distributors and Dealers in the Refrigeration Industry have been quick to realize the brilliant opportunities for profit which GIBSON offers them this year.

ONLY GIBSON HAS THE MAGIC FREEZ'R SHELF, the new, faster freezing, and more efficient type of "evaporator". Write today for information.

GIBSON FEATURES

★ The Freez'r Shelf
★ Buffet Top
★ 12 Point Temperature Control
★ 11 to 15 lbs. of ice
★ Automatic Wall Light
★ "Utilarac"
★ GIBSON Krisperator
★ GIBSON "Veg-a-dor"
★ PresToe Door Opener
★ Lift-out Shelf
★ Ample Bottle Space
★ Twin "Dairy-Kits"
★ Twin "Chil-Trays"
★ Fingertip Ice-Tray Release

No other refrigerator has ALL these features.

GIBSON

GIBSON ELECTRIC REFRIGERATOR CORPORATION

Eastern Division Office: 33 W. 42nd Street, New York, N. Y.
General Sales Office 201 North Wells Building Chicago, Illinois
Home Office & Factory Greenville, Michigan.

ATWATER KENT

Announces a New

REFRIGERATOR

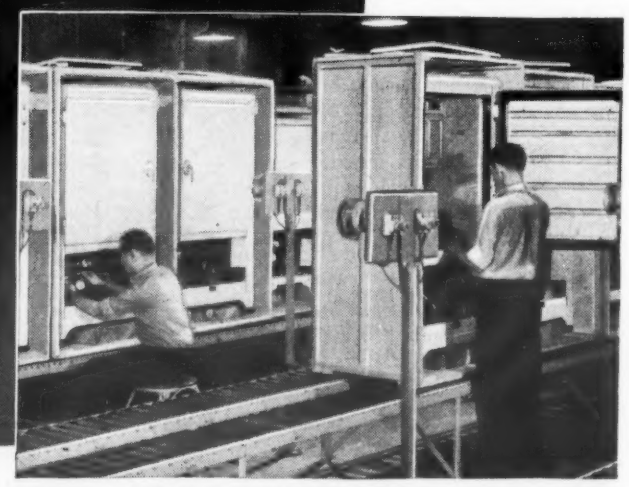
NOW, after months of designing and testing by foremost engineers, comes an utterly new creation—the Atwater Kent Refrigerator—made by the makers of world-famed Atwater Kent Radios. The final word in craftsmanship, the new Atwater Kent Refrigerator has every feature to lighten labor. Every mechanical refinement for economical operation. Every known test points to trouble-free operation for years and years.

A HUGE SECTION of the vast factory for Atwater Kent Radios in Philadelphia is now busy making Atwater Kent Refrigerators. Every single refrigerator is tested and checked, not only piece by piece, but as a unit, for hours at a time. We are happy to have you compare it inch by inch with the finest refrigerators you know, and check its operation costs against the most efficient.

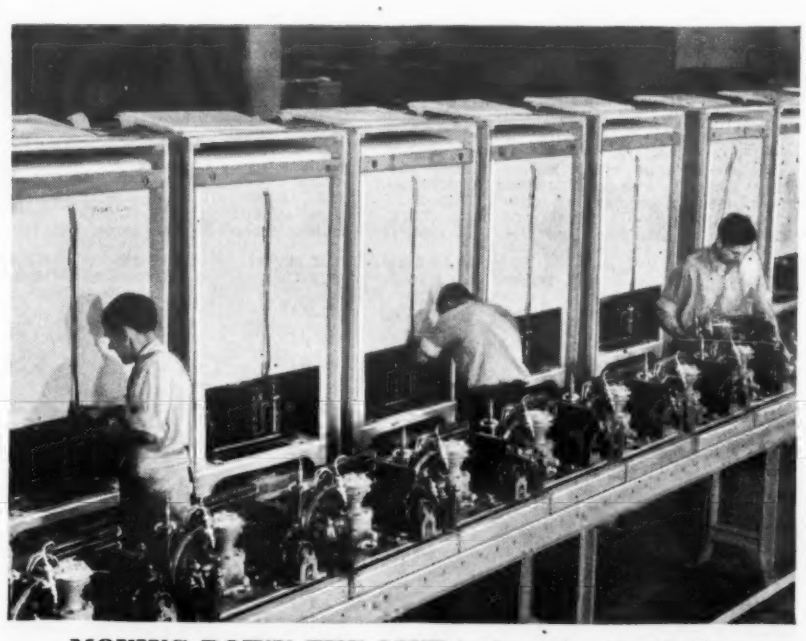
The nameplate of ATWATER KENT has never been placed on a product that is not a delight to own, and a triumph of engineering skill.

We invite you to see the new Atwater Kent Refrigerators or write direct to the address below.

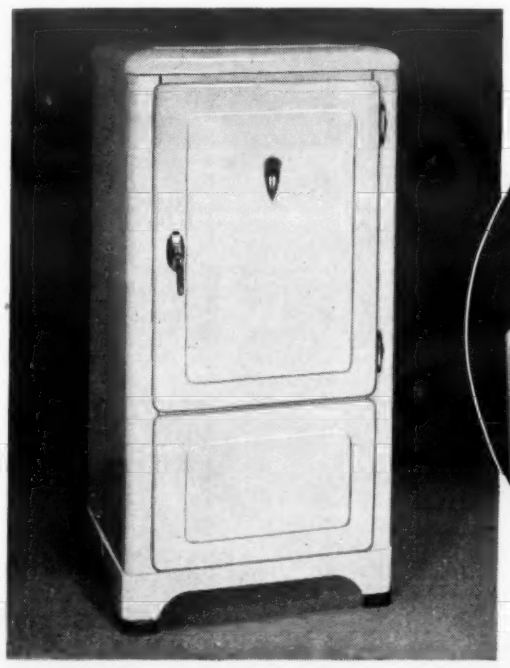
ALL THE CONVENIENCES! Shelves on door. Center freezing unit location. 12-point cold control. Semi-automatic defrosting. Rubber tray. Double-depth tray. Jiffy ice tray release. Removable shelving for bulky foods. Seamless porcelain interior. Extra space for tall bottles. Chromium-finished hardware. Automatic interior light.

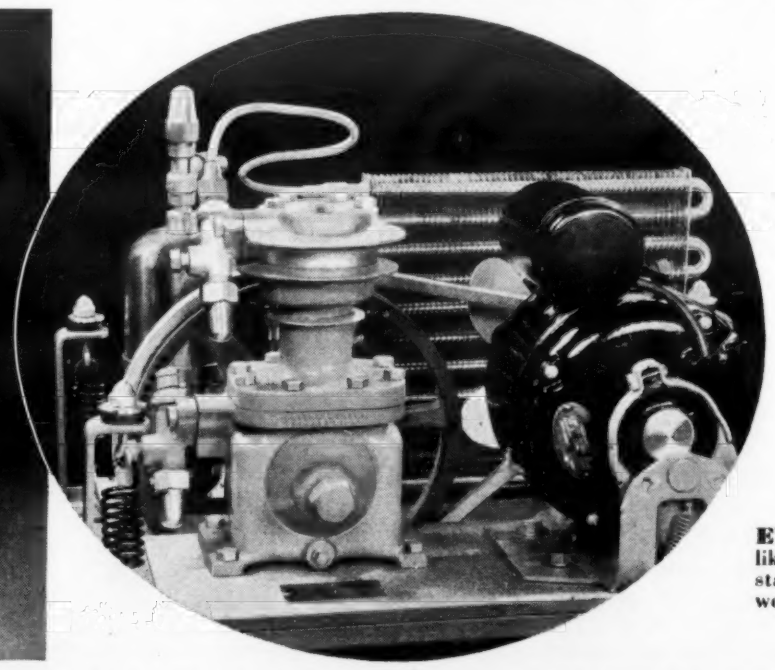


100° IN THE SHADE HERE! Just one of the hot rooms where Atwater Kent Refrigerators are tested for their cold-keeping quality and low operating cost. Other rooms run as high as 130° and still this unit shows reserve capacity!



MOVING DOWN THE LINE in the refrigeration division of the vast Atwater Kent factory in Philadelphia. The latest in special equipment, plant design, and rigid inspection make Atwater Kent Refrigerators a uniform product of high performance standards.





EVERY COMPRESSOR is a glistening polished unit of watch-like accuracy. Plenty of reserve power here. Unique automatic thermostatic expansion valve increases capacity, cutting operating costs in hot weather. Full floating suspension means quiet, vibrationless operation.

ATWATER KENT MANUFACTURING COMPANY • A. ATWATER KENT, PRESIDENT • PHILADELPHIA, PA.

HOUSEHOLD REFRIGERATOR SPECIFICATIONS

Specifications of 281 household electric refrigerators are presented on pages 8, 10, 12, 13, 15, and 17.

The net cubic foot content of the refrigerators is calculated on the basis of standards established by the National Electrical Manufacturers Association (Nema). Prices are installed or f.o.b. factory.

Manufacturers were asked to furnish the condensing unit capacity in pounds of ice melting effect per 24 hours (I.M.E. Lbs.) according to the following standards adopted by the A.S.R.E.:

"The capacity of the condensing unit (compressor and condenser) should be the capacity expressed in pounds of ice melting effect per 24 hours of continuous operation in a 90° F. room and at a suction pressure equal to a 5° F. evaporator temperature.

"In conducting the test, the condensing unit should be set so that it is subjected to the same air circulation as it would normally receive in actual service. In other words, since the condensing unit is intended for self-contained installations, the circulation of air to the unit should be restricted in the same manner as would be the case if the unit were actually installed in the cabinet. One pound ice melting effect is equivalent to the extraction of 144 B.t.u."

In the majority of the specifications, the refrigerator weight is net while a few companies furnished shipping weights. Cabinet dimensions read height x width x depth. Shelf area is calculated according to Nema standards.

The index on page 13 will assist you in finding specifications easily.

Frigidaire

Frigidaire Corp., Dayton, Ohio.

Cabinet—Frigidaire 1-door cabinet for all models except Super and Deluxe models 12-35 and 15-35, which have 2 doors; and WP18-35, which has 4 doors. Steel and wood frame, composition breaker strip, rubber gasket. Frigidaire insulation. Thickness of insulation—Koldchest, D3-35, Standard series, and Master series, sides, back ,and bottom, 2 in., door, 2¼ in. (except Koldchest and model D3-35 where thickness in door is 1½ in. and 2 in., respectively) top, 2 in. (except Koldchest where it is 1½ in.); Super 5-35 and Super 6-35 top, sides, and back, 1¾ in., bottom, 2 in., door 2 1/16 in., Super 7-35 and Super 9-35 top, sides, back, and bottom, 2 in., door 2 1/16 in.; Super 12-35, Super 15-35, Deluxe 12-35 and Deluxe 15-35, top, sides, back, and bottom, 2½ in., door, 2¾ in.; WP18-35, 2½ in. throughout. Chromium-plated Ternstedt hardware.

Compressor—Hermetically sealed rotary compressor for Koldchest D3-35 and Standard series, open-type reciprocating 2-cylinder compressor for all other models. Compressor speed—rotary units 1730 r.p.m.; Master 4-35, 300 r.p.m. rest of Master series and Super 5-35, 6-35, and 7-35, 350 r.p.m.; Super 9-35, and 12-35, 440 r.p.m.; Super 15-35, Deluxe 12-35 and 15-35, 575 r.p.m.; WP18-35, 405 r.p.m. Rotary units direct-driven, others belt-driven. Bore 1½ in. and stroke 1 7/16 in. for all reciprocating compressors except WP18-35, which has bore and stroke of 1¾ in. Bellows and ring shaft seal for reciprocating compressors. Compressor below food compartment, except WP18-35, where it is remotely installed. Refrigerant charge—Koldchest, 11 oz.; D3-35, 14½ oz.; Standard 4-35, 17 oz.; Standard 5-35 and 6-35, 20 oz.; Master 4-35, 2⅛ lbs.; Master 5-35, and 6-35, and Super 5-35, and 6-35, 2⅝ lbs., Master 8-35 and Super 7-35, 2⅝ lbs.; Super 9-35, 2⅞ lbs.; Super 12-35, 3¼ lbs., Super 15-35, Deluxe 12-35 and 15-35, 3½ lbs.; WP18-35, 12½ lbs. Lubrication charge—Koldchest D3-35 and Standard series, 7 oz.; Master 4-35, and 8-35, and Super 7-35, 14 oz.; Master 5-35, 6-35, and Super 5-35, and 6-35, 10 oz.; Super 9-35, 12-35, and 15-35, Deluxe 12-35 and 15-35, 16 oz.; WP18-35, 3½ lbs.

Control—Frigidaire automatic temperature control. Manual defrosting with automatic reset.

Motor—Delco split-phase motor for rotary units; and Delco capacitor on repulsion induction motor for reciprocating compressors.

Evaporator—Frigidaire plate-type brass evaporator, except model WP18-35, which has boiler-and-tube type. Restrictor refrigerant control for rotary units; high side float for reciprocating units, except WP18-35, which uses low side float. Anodically treated aluminum ice cube trays; ice cube tray release.

Condenser—Frigidaire plate-type natural draft condenser for rotary units, fan-cooled fin tube condenser for reciprocating unit

Special Features—Standard series—interior light, utility basket, hydrator. Master series—interior light, servashelf, utility basket, hydrator. Super series—interior light, servashelf, utility basket, hydrator, quick freeze control. Deluxe series—interior light, ice chest, frozen storage chest, utility basket, hydrators with chromium-plated front, servashelf, water cooler, 5 glass containers on revolving base, glass and hollow rolling pin.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
Koldchest ..	2.1	*$ 79.50	...	1/20	F114†	150	D 36 x 23¾ x 20½	P 14¾ x 19¼ x 13⅝	4.1	2	2	36	3
D-3-35	3.1	99.50	...	1/20	F114	168	D 44¼ x 22⅝ x 22½	P 23¼ x 17⅞ x 13¼	6.4	3	2	41	4
Std. 4-35 ...	4.1	119.50	...	1/16	F114	198	D 49⅝ x 24 x 23½	P 27½ x 19¼ x 14⅛	8.4	3	2	41	4
Std. 5-35 ...	5.2	149.50	...	1/12	F114	224	D 52⅜ x 25 x 25¼	P 29⅝ x 20¼ x 16	10.4	3	3	62	6
Std. 6-35 ...	6.1	183.00	...	1/12	F114	262	D 55 x 26¼ x 25¼	P 32¼ x 21½ x 16	13.4	4	3	62	6
Master 4-35.	4.1	134.50	128	1/6	SO_2	276	D 53 x 24 x 22½	P 27½ x 19¼ x 14⅛	8.4	3	3	60	7¼
Master 5-35.	5.2	163.00	150	1/5	SO_2	317	D 55¼ x 25 x 24¼	P 29⅝ x 20¼ x 16	10.0	3	3	72	8½
Master 6-35.	6.1	199.50	150	1/5	SO_2	333	D 57¾ x 26¼ x 24¼	P 32¼ x 21½ x 16	13.0	4	3	72	8½
Master 8-35.	8.1	239.50	150	1/5	SO_2	461	D 60½ x 30 x 26¼	P 34½ x 25 x 17½	16.7	4	6	120	14½
Super 5-35..	5.2	184.50	150	1/5	SO_2	359	P 56¼ x 24⅞ x 25¼	P 29⅝ x 20¼ x 16	10.0	3	3	72	8½
Super 6-35..	6.2	224.50	150	1/5	SO_2	370	P 58⅞ x 25¼ x 26⅜	P 32¼ x 20½ x 17	12.4	4	3	72	8½
Super 7-35..	7.1	259.50	150	1/5	SO_2	419	P 60 x 28 x 27	P 33⅛ x 22⅞ x 17½	15.6	4	6	120	14½
Super 9-35..	9.1	309.50	188	1/4	SO_2	479	P 63 x 31½ x 27	P 36¼ x 26¼ x 17½	17.9	4	6	120	14½
Super 12-35.	12.1	374.50	188	1/4	SO_2	566	P 63¾ x 38⅛ x 30	P 35½ x 32 x 19¾	24.6	8	6	156	19
Super 15-35.	15.1	466.00	245	1/3	SO_2	602	P 65 x 46¾ x 30	P 35½ x 39¾ x 19¾	29.4	7	8	208	25½
Deluxe 12-35	10.0	431.50	245	1/3	SO_2	602	P 63¾ x 38⅛ x 30	P 35½ x 32 x 19¾	19.6	4	6	156	19
Deluxe 15-35	13.1	521.50	245	1/3	SO_2	652	P 65 x 46¾ x 30	P 35½ x 39¾ x 19¾	26.6	4	6	156	19
WP 18-35 ..	18.3	518.00	...	1/3	SO_2	705	P 71⅝ x 46½ x 28½	P 48 x 39¼ x 19¾	33.8	9	6	144	20¼

*First zone.

†F114 $C_2Cl_2F_4$ (Dichlorotetrafluoroethane).

General Electric

General Electric Co.,
Specialty Appliance Sales Dept.
Nela Park, Cleveland, Ohio.

Cabinet—G-E 1-door cabinet for all models except KF12 and KF15, which have 2 doors. Steel frame, Textolite breaker strip, molded rubber gasket. Thermocraft insulation thickness in model X-4—top, sides, back, door 2½ in., bottom 2⅜ in.; X-5—top 2½ in., sides and back 2⅜ in, door and bottom 3¼ in.; X-6—top 2½ in., sides and back 3 in., door 3¼ in., bottom 2⅜ in.; X-7—top 2½ in., sides and back 2⅜ in., door 3¼ in., bottom 2⅞ in.; T-5—top and sides 2½ in., back 2¼ in., door 3¼ in., bottom 3⅜ in.; T-7—top, sides, and back 2½ in., door 3¼ in., bottom 3⅞ in.; T-9—top 3 in., sides and back 3⅜ in., door 4¼ in., bottom 3⅞ in.; K-4 and K-5—top 3½ in., sides 2½ in., back 2¼ in., door 3¼ in., bottom 2¾ in.; K-7—top 3½ in., sides 2¾ in., back 2⅜ in., door 3¼ in., bottom 2¾; KF-12 and KF-15—top 2¼ in., sides 2¾ in., back 3⅛ in., door 3¼ in., bottom 3 in.; LK-1 and LK-2—top and door 2 in., sides, back, and bottom 2½ in. G-E polish chrome hardware.

Compressor—G-E hermetically sealed reciprocating 1-cylinder compressor in all models except KF models which use an open-type 2-cylinder compressor. Sealed units direct-driven with compressor speed 1740 r.p.m. Open-type units belt-driven with compressor speed 450 r.p.m. Bellows shaft seal for open-type unit. Bore 1¼ in. in all models except KF series which have 1½-in. bore. 1⅜-in. stroke for KF models, .85 in. for model T9, .66 in. for all other models. Compressor located below food compartment in K, LK, and KF series; above food compartment in all others. Refrigerant charge—1½ to 3¼ lbs. Lubrication—2 qts. of mineral oil for hermetically sealed units; 1⅛ pts. for open-type units.

Control—G-E automatic temperature control. Semi-automatic defrosting for all models except LK1 and LK2 and X4, which have manual defrosting.

Motor—G-E capacitor for KF line; G-E split-phase induction motor for all others. Oil motor on open-type units annually.

Evaporator—G-E folded and welded and stainless steel evaporator. High side float refrigerant control. Aluminum and rubber ice trays. Du-Flex trays.

Condenser—G-E fan-cooled fin tube condenser for KF models; all others form steel natural-draft condensers.

Guarantee—System, 1 year with additional 4 year service contract on sealed machines; cabinet, 1 year. Serviced by dealers only.

Special Features—Forced feed lubrication, oil-cooling of motor and compressor, self-aligning bearing, pressure operated on loader, acoustic mufflers, ice trays and direct contact with refrigerated surfaces, interior light, pedal door opener, sliding shelves, vegetable, fruit drawers.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	SHIPPING WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
X-4	4.0	*$129.50	83	1/8	SO_2	...	L† 61½ x 23½ x 19⅞	P 27¼ x 18½ x 14⅞	8.1	3	2	40	4
X-5	5.0	169.00	83	1/8	SO_2	352	L 65¼ x 24 x 21½	P 32¼ x 18 x 16⅝	8.9	3	2	40	6
X-6	6.3	204.00	92	1/8	SO_2	488	L 64¼ x 28⅞ x 22¾	P 32⅛ x 22 x 16⅝	11.8	3	4	84	8
X-7	7.0	239.00	92	1/8	SO_2	500	L 66½ x 28⅞ x 22¾	P 33⅞ x 22⅞ x 17	12.5	3	4	84	10¼
T-5	5.0	194.00	83	1/8	SO_2	362	P 65¼ x 24 x 21½	P 32¼ x 18 x 16	8.9	3	2	40	6
T-7	7.0	274.00	92	1/8	SO_2	506	P 67¼ x 28⅞ x 22¾	P 33⅞ x 22⅞ x 17	12.5	3	4	84	10¼
T-9	9.6	340.00	125	1/6	SO_2	700	P 68 x 34¼ x 26¼	P 34⅞ x 27⅛ x 19⅛	16.1	3	4	84	11¼
K-4	4.3	139.50	83	1/8	SO_2	320	L 52¾ x 23 x 23½	P 29 x 18 x 15¼	8.6	3½	2	40	4
K-5	5.2	169.00	83	1/8	SO_2	340	L 52¾ x 26¾ x 23½	P 29 x 21¾ x 15¼	10.2	3½	2	40	6
K-7	7.0	234.00	92	1/8	SO_2	415	L 56¾ x 29½ x 25¾	P 33 x 24 x 17	13.0	3	4	84	10¼
KF-12	12.5	470.00	..	1/4	SO_2	...	P 62½ x 39 x 28	P 37 x 33 x 19½	22.7	4	6	128	14½
KF-15	15.4	520.00	..	1/4	SO_2	...	P 62¼ x 46 x 28	P 37 x 40 x 19½	31.3	4½	6	128	16½
LK-1	....	79.50	80	1/8	SO_2	160	L 36 x 21 x 23⅞	P 13¼ x 16 x 16	....	...	2	20	2
LK-2	....	84.50	80	1/8	SO_2	160	L 36 x 21 x 23⅞	P 13¼ x 16 x 16	....	...	2	20	2

*Installed in zone 1. †Glyptal baked enamel.

Kelvinator

Kelvinator Corp., Detroit, Mich.

Cabinet—Kelvinator 1-door cabinet on all models but SD903, SD1268, and SD1525 which have 2 doors; and model SD2332 which has 3 doors. Wood and steel frame, panelyte breaker strip, Miller rubber gasket. Detroit Paper Products insulation. Thickness of insulation—model CKN 2 in. throughout; model K300 top, sides, back, and bottom 2¾ in., door 2½ in.; models K425, P425, and K 485 top, back, door, and bottom 2½ in., sides 2 in.; models D873 and SD782 3 in. throughout; models SD903, SD1268, SD1525, and SD-2332 3½ in. throughout; all others 2½ in. throughout. National Lock and Grand Rapids Brass chrome-plated hardware.

Compressor—Kelvinator open-type reciprocating compressor, 1-cylinder on model CKN, K300, K425, P425, K485, K541, P541, D513; all others 2 cylinders. 1¼-in. bore except models SD1525, and SD2332 which have 1½-in. bore. 1½-in. stroke except models SD1525 and SD2332 which have 1¾-in. stroke. Belt drive with following compressor speeds—models CKN, K650, P650, and D617 410 r.p.m.; models SD903, and SD1268 640 r.p.m.; models SD1525 and SD 2332 575 r.p.m.; all others 525 r.p.m. Sylphon shaft seal. Compressor below food compartment. Lubrication charge—model CKN 14 oz. other 1-cylinder models 19 oz.; models SD1525 and SD2332 32 oz.; other 2-cylinder models 26 oz.

Control—Ranco manual temperature control with wide cycle defrosting.

Motor—Chiefly Delco make, with condenser start or capacitor a.c., or compound d.c.

Evaporator—Kelvinator tinned copper tank-type in SD models, others of porcelain shell type. High side float refrigerant control. Anodically treated aluminum ice trays. Button tray release for trays in SD models; "Ramshorn" tray lifter in J, K, P, and D models.

Condenser—Kelvinator fan-cooled radiator-type condenser.

Guarantee—System and cabinet, 1 year. Serviced by dealers only.

Special Features—D and SD models, door front "food file;" P models ,plain food file; D models, double depth dessert tray; P and SD models, serving tray lid on vegetable crisper; SD models, frost chest and isothermic freezing compartment; D and SD models, rearranging shelf and folding shelf; SD models, pastry set and water pitcher; K, D, and SD models wire fruit basket; all other models except K300, crisper and electric light.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. B.T.U.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
CKN	2.02	$ 79.50	530*	1/8	SO_2	216	L 36 x 27⅞ x 19	P 12¾ x 23¼ x 13¼	4.29	2	2	42	3.2
K-300	3.00	99.50	680	1/6	SO_2	285	L 48¾ x 24⅜ x 20½	P 23½ x 18⅜ x 12¾	7.91	5	2	42	4.5
K-425	4.25	121.95	680	1/6	SO_2	315	L 48¼ x 24⅜ x 24⅛	P 24⅛ x 19¾ x 16¼	8.20	4	2	42	4.5
P-425	4.25	152.50	680	1/6	SO_2	365	P 50¾ x 24½ x 25	P 24⅛ x 19¾ x 16¼	8.62	4	3	63	6.75
K-485	4.85	148.50	680	1/6	SO_2	349	L 53½ x 25 x 25	P 27 x 19¾ x 16¼	9.89	5	3	63	6.75
K-541	5.41	166.00	680	1/6	SO_2	375	L 51⅞ x 28⅜ x 26¼	P 24⅝ x 22⅛ x 17⅞	11.17	4	4	84	9.0
P-541	5.41	194.50	680	1/6	SO_2	432	P 51⅞ x 28⅜ x 26¼	P 24⅝ x 22⅛ x 17⅞	11.17	4	4	84	9.0
K-650	6.50	199.50	1030	1/6	SO_2	401	L 56¾ x 28⅜ x 26¼	P 29½ x 22⅛ x 17⅞	13.88	5	4	84	9.0
P-650	6.50	232.50	1030	1/6	SO_2	464	P 56¾ x 28⅜ x 26¼	P 29½ x 22⅛ x 17⅞	13.88	5	4	84	9.0
K-760	7.60	237.50	1300	1/4	SO_2	449	L 57½ x 31⅝ x 26¼	P 30¼ x 25¼ x 17⅞	16.76	5	6	126	13.5
P-760	7.60	274.50	1300	1/4	SO_2	511	P 57½ x 31⅝ x 26¼	P 30¼ x 25¼ x 17⅞	16.76	5	6	126	13.5
D-513	5.13	199.50	680	1/6	SO_2	402	P 51¾ x 29⅜ x 26¾	P 24⅝ x 22⅛ x 17⅞	10.66	4	3	81	9.0
D-617	6.17	239.50	1030	1/6	SO_2	432	P 56⅝ x 29⅜ x 26¾	P 29½ x 22⅛ x 17⅞	12.80	5	4	108	12.0
D-736	7.36	289.50	1300	1/4	SO_2	478	P 57¼ x 32½ x 26¾	P 30¼ x 25¼ x 17⅞	14.43	5	4	108	12.0
D-873	8.73	323.50	1300	1/4	SO_2	517	P 62¾ x 33½ x 27¼	P 35⅛ x 25¼ x 17⅞	17.70	6	4	108	12.0
SD-658	6.58	299.50	1300	1/4	SO_2	504	P 57¼ x 32½ x 26¾	P 30¼ x 25¼ x 17⅞	12.94	5	4	81	15.0
SD-782	7.82	339.50	1300	1/4	SO_2	531	P 62¾ x 33½ x 27¼	P 35⅛ x 25¼ x 17⅞	16.20	6	4	108	18.0
SD-903	9.03	379.50	1550	1/3	SO_2	714	P 66⅞ x 38 x 29	P 34½ x 28¼ x 19	18.42	6	4	108	18.0
SD-1268 ...	12.68	489.50	1550	1/3	SO_2	938	P 66⅞ x 49 x 29	P 34½ x 39¼ x 19	25.05	6	6	168	28.0
SD-1525 ...	15.25	599.50	2400	1/3	SO_2	1036	P 73⅞ x 49 x 29	P 41½ x 39¼ x 19	30.63	7	7	189	31.0
SD-2332 ...	23.32	789.50	2400	1/3	SO_2	1425	P 73⅞ x 69 x 29	P 41½ x 59 x 19	45.55	13	9	243	37.0

*Compressor capacity given in B.t.u.'s per hour with 90° F. ambient temperature, 20° F. saturated suction temperature, and refrigerant vapor temperature entering the compressor 65° F.

What the Electrical Industry Holds for Hardware Dealers

By A. E. Allen, Vice President, Westinghouse Electric & Mfg. Co.*

YOU are all familiar with the oft-made statements that the automobile industry or the steel industry will be the one which will lead this nation back to our much-desired prosperity—and this has been the case in previous depressions, but times change, economics are different in this depression from those in many others and I feel that, if not the major, at least one of the outstanding factors in restoring us to normal times in the present crisis will be the electric industry.

Now, what are some of the facts that I can give to back up such bold, optimistic statements? These days everything seems to start and finish with the actions and attitudes of the national government. The tempo of our business life is either buoyed-up or depressed by some new move or new policy which is or is not interpreted as being helpful to business.

Whether we all agree or not with the theories or action of the present administration, no one for one moment denies that today our national government at Washington is wielding a power over the nation more potent than any of us had ever dreamed would be possible, so let us start with Washington in our analysis of this electric situation.

Mr. Roosevelt's 'Abundant Life'

From the very beginning of Mr. Roosevelt's administration—yes, and for years prior to his election—one of the major policies of the President has been a broader use of electricity in the lives of the people of this country. In all his theories and discussions about the "more abundant life" for the American people, he has emphasized the fact that one of the principal ways this can be obtained is by a greater use of electricity in the home.

You all know that one of the first major motives of the administration was comprehensive power surveys, ending with the inauguration of the TVA and the starting of a number of other major power developments.

Now, we are not this morning concerned with the merits of these projects nor do I intend to discuss that battle-ground of government versus private utility operation. I simply want to emphasize that one of the main policies of the president and his administration is the development and greater use of electricity.

Rates Will Be Cut

The use of the TVA and similar activities as yardsticks to measure results of cheaper power and the publicity and pressure which has been brought on the utilities for lower rates have resulted in a general movement all over the country to reduce, in many cases drastically, the cost of current.

Of course, conditions vary and in many cases the very economics of generation and distribution do not allow for further reductions on the existing utility rates, but in far the greater number of cases, readjustments are being made.

Now, in these cases where the utilities are reducing their rates, how can they do this and still remain prosperous, sound financial institutions?

Must Increase Consumption

There is only one way and that is by a material increase in the number of kilowatt hours used by theor present consumers and by the extension of their distribution system to take in every possible new consumer, such as the small communities before considered unprofitable and the rural lines reaching in to the farmer.

They simply must have additional load to make these new rates possible and they are determined to go after this load with an energy and promotional urge which is far in excess of anything which we have up to this time seen in the electrical business.

Only last week I was guest at a luncheon where an official of one of the great Eastern utilities told us he was about to announce—this month—a program of his company to extend their lines so that by the end of this year not a single family within the radius of their vast territory would have an excuse for not using electricity in their home or on their farm. They were going even a step further and introduce a special farm rate, which he felt would make rural electrification very attractive.

Don't make any mistake, gentlemen, these utilities are thoroughly alive and awakened to the problem of electrifying America and doing it quickly, and you are about to see put into effect national and local publicity programs far greater than any of you have any conception of.

Well, you say, all that's fine and we can see great benefits to all classes of industry from such a program on the part of the utilities, but still we know that prosperity cannot come to us until the durable goods industry, the heavy machinery business, begins to improve.

If the electric industry is going to lead us back to prosperity, how are they going to start that ball rolling? It is very true that, by and large, we must get the heavy industries producing before we can really feel that we are back on normal production, but the above program of the greater use of electricity will bring about a fairly prompt stimulation in the manufacture of the durable goods.

During the past four years the utilities of this country have hardly bought a boiler or a steam turbine, they have built very few new substations, have needed few new transformers. In fact, the expansion of our utility systems has been practically at a standstill and yet, inspite of the depression, the natural growth of our country and the spreading out of electrification, handicapped though it has been, have gradually used up most of the surplus generating and distribution capacity of our utilities.

Surplus Capacity Used

In other words, the big reservoir of surplus capacity which they had when the ax fell in 1930 has been gradually used up and today they find themselves almost at the point where they must begin to install major apparatus, these so-called *durable goods.*

How fast these new major additions to their systems will be made is, of course, dependent entirely on how rapidly they can add new millions of kilowatts to their load under the stimulus of lower rates and comprehensive promtional activities.

During these last few years we have all become rather skeptical and calloused when people orate about marvelous programs about to be launched which will be panaceas for depression and unemployment. Is all this picture which I have been painting you just another one of these phantoms? I know that is a very natural question and yet I think you will agree that there are good and sound reasons why in this program of electric expansion we are on firmer ground and are not dealing with the theories and panaceas of politicians or professors.

American People Want It

First—and most important of all—the American people want to be electrified and it is only sound economics that they should. No one questions that the abundant use of cheap electricity can bring about greater ease of living and more efficiency in our homes, whether they be in the cities or on the farms.

You will notice perhaps that I am talking more of the home than of industry. Industry long ago accepted electricity and has drained the benefits to be derived from it to the limit. They will continue to do so, but today our greatest potential market lies in the home and on the farm.

No 'Theories' Involved

The *second* reason why this new program is not just a myth is that none of the problems to bring about this greater use of current involved any new or theoretical ideas.

Our people know its value and want to expand its use in their lives; our utilities are established and are thoroughly equipped, a great industry quite capable of tremendous expansion.

If further proof is necessary that these factors will bring about this increase in the sale and use of electric appliances, I would like to cite to you the actual experience of the Commonwealth & Southern System, who last year inaugurated this policy. Here is what happened to sales of appliances by this utility in 1934 as compared to 1933:

Unit Sales	1934	1933
Refrigerators	33,505	15,730
Ranges	13,188	4,353
Water Heaters	5.433	1,061
Washers	9,102	4,990
Ironers	1,946	678
Vacuum Cleaners	6,293	3,987

This apparatus represents a connected load of 106,000 kilowatts and will consume approximately 59,000,000 kilowatt hours current per year.

I have said that there is nothing theoretical or impractical about this great movement for greater electrical consumption. As a matter of fact, without perhaps our fully realizing it, the movement is with us today; it has already started—months ago. The figures which I gave you from Commonwealth & Southern are proof of its early accomplishment.

I myself have a very vivid appreciation of its gathering momentum by the fact that the merchandising sales of the Westinghouse company increased in 1934 about 70 per cent over those of 1933, and we are so sure of still further increase in 1935 that everyone of our manufacturing schedules has been increased materially, and last fall we spent almost $200,000 in additional plant facilities to take care of the business which we are sure will materialize this year.

How does all this effect the hardware merchant? There is probably no other class of merchant who will benefit more greatly and in more diversified lines from all the phases of this increased electrification. This is practically true where electricity is made more available in rural districts previously not under wire.

Experience shows that rural electrification means a big opportunity to hardware dealers in adjacent towns as they are the logical ones to serve this class of consumer. However, the city hardware merchant can cut himself a large slice of this rapidly increasing electrical market if he is wide-awake and aggressive.

I am intimately familiar with all the wails which we hear about the competition of the electric dealer, the department store, and the chain store. Is there any retail business in which the merchant does not face competition from lots of "big, bad wolves"?

And don't for a moment imagine that we manufacturers do not have the same trials. However, we have not quit or gone broke bacause someone else has manufactured an iron for 98 cents or put on the market a washing machine for $28.

To my mind, the man who is always finding reasons why he *can't* sell goods and *can't* make a profit is best answered by pointing out to him another one of his brother merchants in the same line and same town who had courage, ingenuity, and a willingness to try, and who, as a result, is successful.

Lots of merchants are successful while their brothers are spending all their time trying to prove that such a thing is impossible. You all know that in the last analysis profits are made by selling properly priced, quality goods, because it's dollars that pay the rent, not percentages.

Let me illustrate my point. On an iron you sell at 98 cents you make about 30 cents profit. Just a little more selling effort would enable you to sell a real automatic iron for $5.95 and make a profit of $2.20. Isn't that difference worth a little more real effort? Don't forget your rent and overhead are the same in both cases.

Ideal Electrical Dealer

To my mind, the hardware dealer is a most ideal distributor for electrical goods. Why do I say this? I am afraid my reasons may sound as though I were trying to flatter you,

(*Concluded on Page 11, Column 1*)

*Presented before the Ohio Hardware Association at Columbus, Ohio, Feb. 20, 1935.

RAILWAYS EXPAND AIR-CONDITIONING
Stimulation of Passenger
3,000 CARS ARE EQUIPPED
With 'Gadget' Installed by
"gadget" installed by the Baltimore & Ohio Railroad in the early years of the depression, air-conditioning of passenger cars has increased to a point at which it has added $15,000,000 to the gross revenues of equipment companies and is still providing them with substantial business. The railroads have benefited from the development through the stimulation of passenger traffic.
Although five years ago the air-conditioning of trains was in the experimental stage, upward of a dozen companies are engaged now in supplying this equipment to the railroads. Between $4,000,000 and $5,000,000 of orders are being filled or are pend
as operating the
an cars used in their se
Three Kinds of Installations.
Installations of the new device may be classified into three kinds—mechanical, ice-operated, and a third, which utilizes steam from what in Winter is used in train-heating equipment. There were 932 mechanical, 749 ice and 197 steam-ejector installations made in 1934.
Ice-actuated systems are the cheapest to install, but are said to require more attention in respect to replen
hment with ice and also are r
ted as being not so adaptable
efinements of purificatio
y control as are
tems.
the Pull Manufacturing Company, York Ice Machinery Company, Safety Car Heating and Lighting Company, Westinghouse Electric and Manufacturing Company, General Electric Company, American Car and Foundry Company and Frigidaire Corporation.
Bank Stock Values Slip.
Stocks of banks in this city de
ek accordi

KEROTEST REFRIGERATION VALVES

lead in railroad car air-conditioning more than 4 to 1

★

Of the 932 Mechanical Air-Conditioning Systems Installed In Railroad Cars During 1934, Kerotest Furnished 759 Sets or or 81.4% of the Total Number

In an interesting article summarizing the rapid expansion and development of air conditioned railroad cars, the "New York Times" recently stated, among other things, that 932 mechanical air conditioning systems were installed in 1934.

A check of our sales records reveals that

Kerotest furnished a total of 759 sets of refrigeration valves and fittings to this market alone, or 81.4% of the total—a significant indication of the widespread preference for Kerotest Refrigeration Valves and Fittings in modern air conditioning as well as mechanical refrigeration.

Kerotest Manufacturing Co.
Pittsburgh Pa.

LOCAL REPRESENTATIVES
(Stocks Maintained for Immediate Delivery)

Atlanta, Ga. .....285 Marietta St.
J. M. Tull Metal & Supply Co., Inc.
Baltimore, Md. .....108 South St.
Clendenin Bros., Inc.
Boston, Mass. .....145 High St.
A. E. Borden Co.
Brooklyn, N. Y. .....955 Third Ave.
Coleman Electrical Supply Co., Inc.
Buffalo, N. Y. .....64 Peabody St.
Root Neal & Co.
Cambridge, Mass. .....614 Memorial Drive
Melchior, Armstrong, Dessau Co., Inc.
Chicago, Ill. .....1342 Washington Blvd.
Kerotest Manufacturing Company
Chicago, Ill. .....2334-38 So. Michigan Ave.
H. W. Blythe
Cincinnati, Ohio .....Burbank St.
Merkel Bros. Co.
Cincinnati, Ohio .....2118 Spring Grove Ave.
Williams & Co., Inc.
Cleveland, Ohio .....1748 E. 22nd St.
Williams & Co., Inc.
Dallas, Texas .....Jackson & Pearl Sts.
The Electromotive Company
Decatur, Ill. .....133 Williams St.
Field & Shorb Co.
Denver, Colo. .....16th at Lawrence
The Auto Equipment Co.
Des Moines, Ia. .....W. 11th & D.M.U.R.R.
C. L. Percival Co.
Detroit, Mich. .....1203 Stanley Ave.
J. M. Oberc, Inc.
Fernwood, Miss. .....711 N. Tangipahoa St.
Enochs Sales Co.
Greensboro, N. C. .....714 W. Market St.
Home Appliance Service Co.
Houston, Texas .....306 M & M Bldg.
D. C. Lingo Co.
Indianapolis, Ind. .....229 E. South St.
F. H. Langsenkamp Co.
Kansas City, Mo. .....3033 Main St.
Forslund Pump & Machinery Co.
Long Beach, Calif. .....1295 Gaviota Ave.
L. B. Marsh
Los Angeles, Calif. .....1015 E. Sixteenth St.
Kerotest Manufacturing Company
Los Angeles, Calif. .....3109 Beverley Blvd.
Refrigeration Service, Inc.
Milwaukee, Wis. .....512 N. Water St.
Chase Brass & Copper Co., Inc.
Minneapolis, Minn. .....145 N. 10th St.
Chase Brass & Copper Co., Inc.
Minneapolis, Minn. .....422 So. Seventh St.
Refrigeration & Industrial Supply Co., Inc.
Montreal, Que., Canada .....637 Craig St.
Railway & Engineering Specialties, Ltd.
Newark, N. J. .....Jefferson & Chestnut Sts.
McIntire Connector Co.
New Orleans, La. .....813 Poydras St.
Enochs Sales Co.
New York, N. Y. .....300 Fourth Ave.
Melchior, Armstrong, Dessau Co., Inc.
New York, N. Y. .....43 Warren St.
Paramount Electrical Supply Co., Inc.
New York, N. Y. .....3075 Third Ave.
Aetna Supply Co.
Philadelphia, Pa. .....1516 Callowhill St.
Melchior, Armstrong, Dessau Co., Inc.
Pittsburgh, Pa. .....901 Pennsylvania Ave.
Williams & Co., Inc.
Portland, Ore. .....200 No. 13th St.
Harrison Sales Co.
Providence, R. I. .....156 W. Exchange St.
Rhode Island Supply & Engineering Co.
Rochester, N. Y. .....91 Mt. Hope Ave.
Ontario Metal Supply, Inc.
San Francisco, Calif. .....1077 Mission St.
California Refrigerator Co.
San Francisco, Calif. .....380 Brannan St.
Refrigerating & Power Specialties Co.
Seattle, Wash. .....314 Ninth Ave., No.
Harrison Sales Co.
Sioux City, Iowa .....2310 E. Eighth St.
National Refrigeration Service
Springfield, Mass. .....576 Main St.
Home Utilities Service Supplies Co.
St. Louis, Mo. .....3337 Market St.
Kerotest Manufacturing Company
Syracuse, N. Y. .....314 W. Fayette St.
Syracuse Supply Co.
Toronto, Ont., Canada .....82 Ontario St.
Railway & Engineering Specialties, Ltd.
Vancouver, B. C., Canada
Fleck Bros., Limited
Waterloo, Ia. .....Winterbottom Supply Co.

FACTORY REPRESENTATIVES

Buffalo, N. Y. .....204 Sanders Road
T. F. Wilson
Chicago, Ill. .....1342 Washington Blvd.
C. C. Taylor (Local Stock)
Dallas, Texas .....215 So. Pearl St.
Clarence E. Boren
Dayton, Ohio .....257 Springbrook Blvd.
E. J. Kimm
Denver, Colo. .....1210 California St.
Robert L. Chambers
Detroit, Mich. .....18618 Santa Rosa Drive
Thomas B. McLaughlin
Los Angeles, Calif. .....1015 E. Sixteenth St.
Van D. Clothier (Local Stock)
New York, N. Y. .....806 Graybar Building
K. M. Newcum
San Francisco, Calif. ....Merchant Exchange Bldg.
A. W. V. Johnson (Local Stock)
St. Louis, Mo. .....3337 Market St.
Robert H. Spangler

FOREIGN REPRESENTATIVES

Australia.....235 Clarence St., Sydney, N.S.W.
F. C. Lovelock, Ltd.
Europe and South America
Melchior, Armstrong, Dessau Co., Inc.
300 Fourth Ave., New York, N. Y.
Puerto Rico
Refrigeration Supply Co.
P. O. Box 328, Puerta de Tierra, San Juan

KEROTEST

HOUSEHOLD REFRIGERATOR SPECIFICATIONS

Specifications of 281 household electric refrigerators are presented on pages 8, 10, 12, 13, 15, and 17.

The net cubic foot content of the refrigerators is calculated on the basis of standards established by the National Electrical Manufacturers Association (Nema). Prices are installed or f.o.b. factory.

Manufacturers were asked to furnish the condensing unit capacity in pounds of ice melting effect per 24 hours (I.M.E. Lbs.) according to the following standards adopted by the A.S.R.E.:

"The capacity of the condensing unit (compressor and condenser) should be the capacity expressed in pounds of ice melting effect per 24 hours of continuous operation in a 90° F. room and at a suction pressure equal to a 5° F. evaporator temperature.

"In conducting the test, the condensing unit should be set so that it is subjected to the same air circulation as it would normally receive in actual service. In other words, since the condensing unit is intended for self-contained installations, the circulation of air to the unit should be restricted in the same manner as would be the case if the unit were actually installed in the cabinet. One pound ice melting effect is equivalent to the extraction of 144 B.t.u."

In the majority of the specifications, the refrigerator weight is net while a few companies furnished shipping weights. Cabinet dimensions read height x width x depth. Shelf area is calculated according to Nema standards.

The index on page 13 will assist you in finding specifications easily.

Frigidaire

Frigidaire Corp., Dayton, Ohio.

Cabinet—Frigidaire 1-door cabinet for all models except Super and Deluxe models 12-35 and 15-35, which have 2 doors; and WP18-35, which has 4 doors. Steel and wood frame, composition breaker strip, rubber gasket. Frigidaire insulation. Thickness of insulation—Koldchest, D3-35, Standard series, and Master series, sides, back and bottom, 2 in., door, 2¼ in. (except Koldchest and model D3-35 where thickness in door is 1½ in. and 2 in., respectively) top, 2 in. (except Koldchest where it is 1½ in.); Super 5-35 and Super 6-35 top, sides, and back, 1¾ in., bottom, 2 in., door 2 1/16 in., Super 7-35 and Super 9-35 top, sides, back, and bottom, 2 in., door 2 1/16 in.; Super 12-35, Super 15-35, Deluxe 12-35 and Deluxe 15-35, top, sides, back, and bottom, 2½ in., door, 2¾ in.; WP18-35, 2½ in. throughout. Chromium-plated Ternstedt hardware.

Compressor—Hermetically sealed rotary compressor for Koldchest D3-35 and Standard series, open-type reciprocating 2-cylinder compressor for all other models. Compressor speed—rotary units 1730 r.p.m.; Master 4-35, 300 r.p.m. rest of Master series and Super 5-35, 6-35, and 7-35, 350 r.p.m.; Super 9-35, and 12-35, 440 r.p.m.; Super 15-35, Deluxe 12-35 and 15-35, 575 r.p.m.; WP18-35, 405 r.p.m. Rotary units direct-driven, others belt-driven. Bore 1½ in. and stroke 1 7/16 in. for all reciprocating compressors except WP18-35, which has bore and stroke of 1¾ in. Bellows and ring shaft seal for reciprocating compressors. Compressor below food compartment, except WP18-35, where it is remotely installed. Refrigerant charge—Koldchest, 11 oz.; D3-35, 14½ oz.; Standard 4-35, 17 oz.; Standard 5-35 and 6-35, 20 oz.; Master 4-35, 2⅛ lbs.; Master 5-35, and 6-35, and Super 5-35, and 6-35, 2⅜ lbs., Master 8-35 and Super 7-35, 2⅝ lbs.; Super 9-35, 2⅞ lbs.; Super 12-35, 3¼ lbs., Super 15-35, Deluxe 12-35 and 15-35, 3½ lbs.; WP18-35, 12½ lbs. Lubrication charge—Koldchest D3-35 and Standard series, 7 oz.; Master 4-35, and 8-35, and Super 7-35, 14 oz.; Master 5-35, 6-35, and Super 5-35, and 6-35, 10 oz.; Super 9-35, 12-35, and 15-35, Deluxe 12-35 and 15-35, 16 oz.; WP18-35, 3½ lbs.

Control—Frigidaire automatic temperature control. Manual defrosting with automatic reset.

Motor—Delco split-phase motor for rotary units; and Delco capacitor on repulsion induction motor for reciprocating compressors.

Evaporator—Frigidaire plate-type brass evaporator, except model WP18-35, which has boiler-and-tube type. Restrictor refrigerant control for rotary units; high side float for reciprocating units, except WP18-35, which uses low side float. Anodically treated aluminum ice cube trays; ice cube tray release.

Condenser—Frigidaire plate-type natural draft condenser for rotary units, fan-cooled fin tube condenser for reciprocating unit

Special Features—Standard series—interior light, utility basket, hydrator. Master series—interior light, servashelf, utility basket, hydrator. Super series—interior light, servashelf, utility basket, hydrator, quick freeze control. Deluxe series—interior light, ice chest, frozen storage chest, utility basket, hydrators with chromium-plated front, servashelf, water cooler, 5 glass containers on revolving base, glass and hollow rolling pin.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
Koldchest ..	2.1	*$ 79.50	...	1/20	F114†	150	D 36 x 23¾ x 20½ P 14¾ x 19¼ x 13⅝	4.1	2	2	36	3
D-3-35	3.1	99.50	...	1/20	F114	168	D 44¼ x 22⅝ x 22½ P 23¼ x 17⅞ x 13¼	6.4	3	2	41	4
Std. 4-35 ...	4.1	119.50	...	1/16	F114	198	D 49⅝ x 24 x 23½ P 27½ x 19¼ x 14⅛	8.4	3	2	41	4
Std. 5-35 ...	5.2	149.50	...	1/12	F114	224	D 52⅜ x 25 x 25¼ P 29⅝ x 20¼ x 16	10.4	3	3	62	6
Std. 6-35 ...	6.1	183.00	...	1/12	F114	262	D 55 x 26¼ x 25¼ P 32¼ x 21½ x 16	13.4	4	3	62	6
Master 4-35.	4.1	134.50	128	1/6	SO_2	276	D 53 x 24 x 22½ P 27½ x 19¼ x 14⅛	8.4	3	3	60	7¼
Master 5-35.	5.2	163.00	150	1/5	SO_2	317	D 55¼ x 25 x 24¼ P 29⅝ x 20¼ x 16	10.0	3	3	72	8½
Master 6-35.	6.1	199.50	150	1/5	SO_2	333	D 57¾ x 26¼ x 24¼ P 32¼ x 21½ x 16	13.0	4	3	72	8½
Master 8-35.	8.1	239.50	150	1/5	SO_2	461	D 60½ x 30 x 26¼ P 34½ x 25 x 17½	16.7	4	6	120	14½
Super 5-35..	5.2	184.50	150	1/5	SO_2	359	P 56¼ x 24⅞ x 25¼ P 29⅝ x 20¼ x 16	10.0	3	3	72	8½
Super 6-35..	6.2	224.50	150	1/5	SO_2	370	P 58⅞ x 25¼ x 26⅜ P 32¼ x 20½ x 17	12.4	4	3	72	8½
Super 7-35..	7.1	259.50	150	1/5	SO_2	419	P 60 x 28 x 27 P 33⅛ x 22⅞ x 17½	15.6	4	6	120	14½
Super 9-35..	9.1	309.50	188	1/4	SO_2	479	P 63 x 31½ x 27 P 36¼ x 26¼ x 17½	17.9	4	6	120	14½
Super 12-35.	12.1	374.50	188	1/4	SO_2	566	P 63¾ x 38⅛ x 30 P 35½ x 32 x 19¾	24.6	8	6	156	19
Super 15-35.	15.1	466.00	245	1/3	SO_2	602	P 65 x 46¾ x 30 P 35½ x 39¾ x 19¾	29.4	7	8	208	25½
Deluxe 12-35	10.0	431.50	245	1/3	SO_2	602	P 63¾ x 38⅛ x 30 P 35½ x 32 x 19¾	19.6	4	6	156	19
Deluxe 15-35	13.1	521.50	245	1/3	SO_2	652	P 65 x 46¾ x 30 P 35½ x 39¾ x 19¾	26.6	4	6	156	19
WP 18-35 ..	18.3	518.00	...	1/3	SO_2	705	P 71⅝ x 46½ x 28½ P 48 x 39¼ x 19¾	33.8	9	6	144	20¼

*First zone. †F114 $C_2Cl_2F_4$ (Dichlorotetrafluoroethane).

General Electric

General Electric Co.,
Specialty Appliance Sales Dept.
Nela Park, Cleveland, Ohio.

Cabinet—G-E 1-door cabinet for all models except KF12 and KF15, which have 2 doors. Steel frame, Textolite breaker strip, molded rubber gasket. Thermocraft insulation thickness in model X-4—top, sides, back, door 2½ in., bottom 2⅜ in.; X-5—top 2½ in., sides and back 2⅝ in, door and bottom 3¼ in.; X-6—top 2½ in., sides and back 3 in., door 3¼ in., bottom 2⅜ in.; X-7—top 2½ in., sides and back 2⅝ in., door 3¼ in., bottom 2⅞ in.; T-5—top and sides 2½ in., back 2¼ in., door 3¼ in., bottom 3⅜ in.; T-7—top, sides, and back 2½ in., door 3¼ in., bottom 3⅞ in.; T-9—top 3 in., sides and back 3⅛ in., door 4¼ in., bottom 3⅞ in.; K-4 and K-5—top 3½ in., sides 2½ in., back 2¼ in., door 3¼ in., bottom 2¾ in.; K-7—top 3½ in., sides 2¾ in., back 2⅝ in., door 3¼ in., bottom 2¾; KF-12 and KF-15—top 2¼ in., sides 2¾ in., back 3⅛ in., door 3¼ in., bottom 3 in.; LK-1 and LK-2—top and door 2 in., sides, back, and bottom 2½ in. G-E polish chrome hardware.

Compressor—G-E hermetically sealed reciprocating 1-cylinder compressor in all models except KF models which use an open-type 2-cylinder compressor. Sealed units direct-driven with compressor speed 1740 r.p.m. Open-type units belt-driven with compressor speed 450 r.p.m. Bellows shaft seal for open-type unit. Bore 1¼ in. in all models except KF series which have 1½-in. bore. 1⅜-in. stroke for KF models, .85 in. for model T9, .66 in. for all other models. Compressor located below food compartment in K, LK, and KF series; above food compartment in all others. Refrigerant charge—1½ to 3¼ lbs. Lubrication—2 qts. of mineral oil for hermetically sealed units; 1⅛ pts. for open-type units.

Control—G-E automatic temperature control. Semi-automatic defrosting for all models except LK1 and LK2 and X4, which have manual defrosting.

Motor—G-E capacitor for KF line; G-E split-phase induction motor for all others. Oil motor on open-type units annually.

Evaporator—G-E folded and welded and stainless steel evaporator. High side float refrigerant control. Aluminum and rubber ice trays. Du-Flex trays.

Condenser—G-E fan-cooled fin tube condenser for KF models; all others form steel natural-draft condensers.

Guarantee—System, 1 year with additional 4 year service contract on sealed machines; cabinet, 1 year. Serviced by dealers only.

Special Features—Forced feed lubrication, oil-cooling of motor and compressor, self-aligning bearing, pressure operated on loader, acoustic mufflers, ice trays and direct contact with refrigerated surfaces, interior light, pedal door opener, sliding shelves, vegetable, fruit drawers.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	SHIPPING WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
X-4	4.0	*$129.50	83	1/8	SO_2	...	L† 61½ x 23½ x 19⅞ P 27¼ x 18½ x 14⅞	8.1	3	2	40	4
X-5	5.0	169.00	83	1/8	SO_2	352	L 65¼ x 24 x 21½ P 32¼ x 18 x 16⅝	8.9	3	2	40	6
X-6	6.3	204.00	92	1/8	SO_2	488	L 64¼ x 28⅞ x 22¾ P 32⅛ x 22 x 16⅝	11.8	3	4	84	8
X-7	7.0	239.00	92	1/8	SO_2	500	L 66½ x 28⅞ x 22¾ P 33⅞ x 22⅞ x 17	12.5	3	4	84	10¼
T-5	5.0	194.00	83	1/8	SO_2	362	P 65¼ x 24 x 21½ P 32¼ x 18 x 16	8.9	3	2	40	6
T-7	7.0	274.00	92	1/8	SO_2	506	P 67¼ x 28⅞ x 22¾ P 33⅞ x 22⅞ x 17	12.5	3	4	84	10¼
T-9	9.6	340.00	125	1/6	SO_2	700	P 68 x 34¼ x 26¼ P 34⅞ x 27⅛ x 19⅛	16.1	3	4	84	11¼
K-4	4.3	139.50	83	1/8	SO_2	320	L 52¾ x 23 x 23½ P 29 x 18 x 15¼	8.6	3½	2	40	4
K-5	5.2	169.00	83	1/8	SO_2	340	L 52¾ x 26¾ x 23½ P 29 x 21¾ x 15¼	10.2	3½	2	40	6
K-7	7.0	234.00	92	1/8	SO_2	415	L 56¾ x 29½ x 25¾ P 33 x 24 x 17	13.0	3	4	84	10¼
KF-12	12.5	470.00	..	1/4	SO_2	...	P 62½ x 39 x 28 P 37 x 33 x 19½	22.7	4	6	128	14½
KF-15	15.4	520.00	..	1/4	SO_2	...	P 62¼ x 46 x 28 P 37 x 40 x 19½	31.3	4½	6	128	16½
LK-1	....	79.50	80	1/8	SO_2	160	L 36 x 21 x 23⅞ P 13¼ x 16 x 16	....	...	2	20	2
LK-2	....	84.50	80	1/8	SO_2	160	L 36 x 21 x 23⅞ P 13¼ x 16 x 16	....	...	2	20	2

*Installed in zone 1. †Glyptal baked enamel.

Kelvinator

Kelvinator Corp., Detroit, Mich.

Cabinet—Kelvinator 1-door cabinet on all models but SD903, SD1268, and SD1525 which have 2 doors; and model SD2332 which has 3 doors. Wood and steel frame, panelyte breaker strip, Miller rubber gasket. Detroit Paper Products insulation. Thickness of insulation—model CKN 2 in. throughout; model K300 top, sides, back, and bottom 2¾ in., door 2½ in.; models K425, P425, and K 485 top, back, door, and bottom 2½ in., sides 2 in.; models D873 and SD782 3 in. throughout; models SD903, SD1268, SD1525, and SD-2332 3½ in. throughout; all others 2½ in. throughout. National Lock and Grand Rapids Brass chrome-plated hardware.

Compressor—Kelvinator open-type reciprocating compressor, 1-cylinder on model CKN, K300, K425, P425, K485, K541, P541, D513; all others 2 cylinders. 1¼-in. bore except models SD1525, and SD2332 which have 1½-in. bore. 1½-in. stroke except models SD1525 and SD2332 which have 1¾-in. stroke. Belt drive with following compressor speeds—models CKN, K650, P650, and D617 410 r.p.m.; models SD903, and SD1268 640 r.p.m.; models SD1525 and SD 2332 575 r.p.m.; all others 525 r.p.m. Sylphon shaft seal. Compressor below food compartment. Lubrication charge—model CKN 14 oz. other 1-cylinder models 19 oz.; models SD1525 and SD2332 32 oz.; other 2-cylinder models 26 oz.

Control—Ranco manual temperature control with wide cycle defrosting.

Motor—Chiefly Delco make, with condenser start or capacitor a.c., or compound d.c.

Evaporator—Kelvinator tinned copper tank-type in SD models, others of porcelain shell type. High side float refrigerant control. Anodically treated aluminum ice trays. Button tray release for trays in SD models; "Ramshorn" tray lifter in J, K, P, and D models.

Condenser—Kelvinator fan-cooled radiator-type condenser.

Guarantee—System and cabinet, 1 year. Serviced by dealers only.

Special Features—D and SD models, door front "food file;" P models ,plain food file; D models, double depth dessert tray; P and SD models, serving tray lid on vegetable crisper; SD models, frost chest and isothermic freezing compartment; D and SD models, rearranging shelf and folding shelf; SD models, pastry set and water pitcher; K, D, and SD models wire fruit basket; all other models except K300, crisper and electric light.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. B.T.U.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
CKN	2.02	$ 79.50	530*	1/8	SO_2	216	L 36 x 27⅞ x 19 P 12¾ x 23¼ x 13¼	4.29	2	2	42	3.2
K-300	3.00	99.50	680	1/6	SO_2	285	L 48¾ x 24⅜ x 20½ P 23½ x 18⅜ x 12¾	7.91	5	2	42	4.5
K-425	4.25	121.95	680	1/6	SO_2	315	L 48¼ x 24⅜ x 24⅛ P 24⅛ x 19¾ x 16¼	8.20	4	2	42	4.5
P-425	4.25	152.50	680	1/6	SO_2	365	P 50¾ x 24½ x 25 P 24⅛ x 19¾ x 16¼	8.62	4	3	63	6.75
K-485	4.85	148.50	680	1/6	SO_2	349	L 53½ x 25 x 25 P 27 x 19¾ x 16¼	9.89	5	3	63	6.75
K-541	5.41	166.00	680	1/6	SO_2	375	L 51⅞ x 28⅜ x 26¼ P 24⅝ x 22⅛ x 17⅞	11.17	4	4	84	9.0
P-541	5.41	194.50	680	1/6	SO_2	432	P 51⅞ x 28⅜ x 26¼ P 24⅝ x 22⅛ x 17⅞	11.17	4	4	84	9.0
K-650	6.50	199.50	1030	1/6	SO_2	401	L 56¾ x 28⅜ x 26¼ P 29½ x 22⅛ x 17⅞	13.88	5	4	84	9.0
P-650	6.50	232.50	1030	1/6	SO_2	464	P 56¾ x 28⅜ x 26¼ P 29½ x 22⅛ x 17⅞	13.88	5	4	84	9.0
K-760	7.60	237.50	1300	1/4	SO_2	449	L 57½ x 31⅝ x 26¼ P 30¼ x 25¼ x 17⅞	16.76	5	6	126	13.5
P-760	7.60	274.50	1300	1/4	SO_2	511	P 57½ x 31⅝ x 26¼ P 30¼ x 25¼ x 17⅞	16.76	5	6	126	13.5
D-513	5.13	199.50	680	1/6	SO_2	402	P 51¾ x 29⅜ x 26¾ P 24⅝ x 22⅛ x 17⅞	10.66	4	3	81	9.0
D-617	6.17	239.50	1030	1/6	SO_2	432	P 56⅝ x 29⅜ x 26¾ P 29½ x 22⅛ x 17⅞	12.80	5	4	108	12.0
D-736	7.36	289.50	1300	1/4	SO_2	478	P 57¼ x 32½ x 26¾ P 30¼ x 25¼ x 17⅞	14.43	5	4	108	12.0
D-873	8.73	323.50	1300	1/4	SO_2	517	P 62¾ x 33½ x 27¼ P 35⅛ x 25¼ x 17⅞	17.70	6	4	108	12.0
SD-658	6.58	299.50	1300	1/4	SO_2	504	P 57¼ x 32½ x 26¾ P 30¼ x 25¼ x 17⅞	12.94	5	4	81	15.0
SD-782	7.82	339.50	1300	1/4	SO_2	531	P 62¾ x 33½ x 27¼ P 35⅛ x 25¼ x 17⅞	16.20	6	4	108	18.0
SD-903	9.03	379.50	1550	1/3	SO_2	714	P 66⅞ x 38 x 29 P 34½ x 28¼ x 19	18.42	6	4	108	18.0
SD-1268 ...	12.68	489.50	1550	1/3	SO_2	938	P 66⅞ x 49 x 29 P 34½ x 39¼ x 19	25.05	6	6	168	28.0
SD-1525 ...	15.25	599.50	2400	1/3	SO_2	1036	P 73⅞ x 49 x 29 P 41½ x 39¼ x 19	30.63	7	7	189	31.0
SD-2332 ...	23.32	789.50	2400	1/3	SO_2	1425	P 73⅞ x 69 x 29 P 41½ x 59 x 19	45.55	13	9	243	37.0

*Compressor capacity given in B.t.u.'s per hour with 90° F. ambient temperature, 20° F. saturated suction temperature, and refrigerant vapor temperature entering the compressor 65° F.

What the Electrical Industry Holds for Hardware Dealers

By A. E. Allen, Vice President, Westinghouse Electric & Mfg. Co.*

YOU are all familiar with the oft-made statements that the automobile industry or the steel industry will be the one which will lead this nation back to our much-desired prosperity—and this has been the case in previous depressions, but times change, economics are different in this depression from those in many others and I feel that, if not the major, at least one of the outstanding factors in restoring us to normal times in the present crisis will be the electric industry.

Now, what are some of the facts that I can give to back up such bold, optimistic statements? These days everything seems to start and finish with the actions and attitudes of the national government. The tempo of our business life is either buoyed-up or depressed by some new move or new policy which is or is not interpreted as being helpful to business.

Whether we all agree or not with the theories or action of the present administration, no one for one moment denies that today our national government at Washington is wielding a power over the nation more potent than any of us had ever dreamed would be possible, so let us start with Washington in our analysis of this electric situation.

Mr. Roosevelt's 'Abundant Life'

From the very beginning of Mr. Roosevelt's administration—yes, and for years prior to his election—one of the major policies of the President has been a broader use of electricity in the lives of the people of this country. In all his theories and discussions about the "more abundant life" for the American people, he has emphasized the fact that one of the principal ways this can be obtained is by a greater use of electricity in the home.

You all know that one of the first major motives of the administration was comprehensive power surveys, ending with the inauguration of the TVA and the starting of a number of other major power developments.

Now, we are not this morning concerned with the merits of these projects nor do I intend to discuss that battle-ground of government versus private utility operation. I simply want to emphasize that one of the main policies of the president and his administration is the development and greater use of electricity.

Rates Will Be Cut

The use of the TVA and similar activities as yardsticks to measure results of cheaper power and the publicity and pressure which has been brought on the utilities for lower rates have resulted in a general movement all over the country to reduce, in many cases drastically, the cost of current.

Of course, conditions vary and in many cases the very economics of generation and distribution do not allow for further reductions on the existing utility rates, but in far the greater number of cases, readjustments are being made.

Now, in these cases where the utilities are reducing their rates, how can they do this and still remain prosperous, sound financial institutions?

Must Increase Consumption

There is only one way and that is by a material increase in the number of kilowatt hours used by theor present consumers and by the extension of their distribution system to take in every possible new consumer, such as the small communities before considered unprofitable and the rural lines reaching in to the farmer.

They simply must have additional load to make these new rates possible and they are determined to go after this load with an energy and promotional urge which is far in excess of anything which we have up to this time seen in the electrical business.

Only last week I was guest at a luncheon where an official of one of the great Eastern utilities told us he was about to announce—this month—a program of his company to extend their lines so that by the end of this year not a single family within the radius of their vast territory would have an excuse for not using electricity in their home or on their farm. They were going even a step further and introduce a special farm rate, which he felt would make rural electrification very attractive.

Don't make any mistake, gentlemen, these utilities are thoroughly alive and awakened to the problem of electrifying America and doing it quickly, and you are about to see put into effect national and local publicity programs far greater than any of you have any conception of.

Well, you say, all that's fine and we can see great benefits to all classes of industry from such a program on the part of the utilities, but still we know that prosperity cannot come to us until the durable goods industry, the heavy machinery business, begins to improve.

If the electric industry is going to lead us back to prosperity, how are they going to start that ball rolling? It is very true that, by and large, we must get the heavy industries producing before we can really feel that we are back on normal production, but the above program of the greater use of electricity will bring about a fairly prompt stimulation in the manufacture of the durable goods.

During the past four years the utilities of this country have hardly bought a boiler or a steam turbine, they have built very few new substations, have needed few new transformers. In fact, the expansion of our utility systems has been practically at a standstill and yet, inspite of the depression, the natural growth of our country and the spreading out of electrification, handicapped though it has been, have gradually used up most of the surplus generating and distribution capacity of our utilities.

Surplus Capacity Used

In other words, the big reservoir of surplus capacity which they had when the ax fell in 1930 has been gradually used up and today they find themselves almost at the point where they must begin to install major apparatus, these so-called *durable goods.*

How fast these new major additions to their systems will be made is, of course, dependent entirely on how rapidly they can add new millions of kilowatts to their load under the stimulus of lower rates and comprehensive promtional activities.

During these last few years we have all become rather skeptical and caloused when people orate about marvelous programs about to be launched which will be panaceas for depression and unemployment. Is all this picture which I have been painting you just another one of these phantoms? I know that is a very natural question and yet I think you will agree that there are good and sound reasons why in this program of electric expansion we are on firmer ground and are not dealing with the theories and panaceas of politicians or professors.

American People Want It

First—and most important of all—the American people want to be electrified and it is only sound economics that they should. No one questions that the abundant use of cheap electricity can bring about greater ease of living and more efficiency in our homes, whether they be in the cities or on the farms.

You will notice perhaps that I am talking more of the home than of industry. Industry long ago accepted electricity and has drained the benefits to be derived from it to the limit. They will continue to do so, but today our greatest potential market lies in the home and on the farm.

No 'Theories' Involved

The *second* reason why this new program is not just a myth is that none of the problems to bring about this greater use of current involved any new or theoretical ideas.

Our people know its value and want to expand its use in their lives; our utilities are established and are thoroughly equipped, a great industry quite capable of tremendous expansion.

If further proof is necessary that these factors will bring about this increase in the sale and use of electric appliances, I would like to cite to you the actual experience of the Commonwealth & Southern System, who last year inaugurated this policy. Here is what happened to sales of appliances by this utility in 1934 as compared to 1933:

Unit Sales	1934	1933
Refrigerators	33,505	15,730
Ranges	13,188	4,353
Water Heaters	5.433	1,061
Washers	9,102	4,990
Ironers	1,946	678
Vacuum Cleaners	6,293	3,987

This apparatus represents a connected load of 106,000 kilowatts and will consume approximately 59,000,000 kilowatt hours current per year.

I have said that there is nothing theoretical or impractical about this great movement for greater electrical consumption. As a matter of fact, without perhaps our fully realizing it, the movement is with us today; it has already started—months ago. The figures which I gave you from Commonwealth & Southern are proof of its early accomplishment.

I myself have a very vivid appreciation of its gathering momentum by the fact that the merchandising sales of the Westinghouse company increased in 1934 about 70 per cent over those of 1933, and we are so sure of still further increase in 1935 that everyone of our manufacturing schedules has been increased materially, and last fall we spent almost $200,000 in additional plant facilities to take care of the business which we are sure will materialize this year.

How does all this effect the hardware merchant? There is probably no other class of merchant who will benefit more greatly and in more diversified lines from all the phases of this increased electrification. This is practically true where electricity is made more available in rural districts previously not under wire.

Experience shows that rural electrification means a big opportunity to hardware dealers in adjacent towns as they are the logical ones to serve this class of consumer. However, the city hardware merchant can cut himself a large slice of this rapidly increasing electrical market if he is wide-awake and aggressive.

I am intimately familiar with all the wails which we hear about the competition of the electric dealer, the department store, and the chain store. Is there any retail business in which the merchant does not face competition from lots of "big, bad wolves"?

And don't for a moment imagine that we manufacturers do not have the same trials. However, we have not quit or gone broke bacause someone else has manufactured an iron for 98 cents or put on the market a washing machine for $28.

To my mind, the man who is always finding reasons why he *can't* sell goods and *can't* make a profit is best answered by pointing out to him another one of his brother merchants in the same line and same town who had courage, ingenuity, and a willingness to try, and who, as a result, is successful.

Lots of merchants are successful while their brothers are spending all their time trying to prove that such a thing is impossible. You all know that in the last analysis profits are made by selling properly priced, quality goods, because it's dollars that pay the rent, not percentages.

Let me illustrate my point. On an iron you sell at 98 cents you make about 30 cents profit. Just a little more selling effort would enable you to sell a real automatic iron for $5.95 and make a profit of $2.20. Isn't that difference worth a little more real effort? Don't forget your rent and overhead are the same in both cases.

Ideal Electrical Dealer

To my mind, the hardware dealer is a most ideal distributor for electrical goods. Why do I say this? I am afraid my reasons may sound as though I were trying to flatter you,

(Concluded on Page 11, Column 1)

*Presented before the Ohio Hardware Association at Columbus, Ohio, Feb. 20, 1935.

RAILWAYS EXPAND AIR-CONDITIONING

3,000 CARS ARE EQUIPPED With 'Gadget' Installed by B... of Experiment.

"gadget" installed by the Baltimore & Ohio Railroad in the early years of the depression, air-conditioning of passenger cars has increased to a point at which it has added $15,000,000 to the gross revenues of equipment companies and is still providing them with substantial business. The railroads have benefited from the development through the stimulation of passenger traffic.

Although five years ago the air-conditioning of trains was in the experimental stage, upward of a dozen companies are engaged now in supplying this equipment to the railroads. Between $4,000,000 and $5,000,000 of orders are being filled or are pend...

...as operating the in... ...an cars used in their ser...

Three Kinds of Installations.

Installations of the new device may be classified into three kinds—mechanical, ice-operated, and a third, which utilizes steam from what in Winter is used in train-heating equipment. There were 932 mechanical, 749 ice and 197 steam-ejector installations made in 1934.

Ice-actuated systems are the cheapest to install, but are said to require more attention in respect to replen... ...hment with ice and also are r... ...ted as being not so adaptable... ...efinements of purificatio... ...y control as are ... ...tems.

...the Pull... ...Manufacturing Company, York Ice Machinery Company, Safety Car Heating and Lighting Company, Westinghouse Electric and Manufacturing Company, General Electric Company, American Car and Foundry Company and Frigidaire Corporation.

Bank Stock Values Slip.

Stocks of banks in this city de... ...ak accordi...

KEROTEST REFRIGERATION VALVES lead in railroad car air-conditioning more than 4 to 1

★

Of the 932 Mechanical Air-Conditioning Systems Installed In Railroad Cars During 1934, Kerotest Furnished 759 Sets or or 81.4% of the Total Number

In an interesting article summarizing the rapid expansion and development of air conditioned railroad cars, the "New York Times" recently stated, among other things, that 932 mechanical air conditioning systems were installed in 1934.

A check of our sales records reveals that

Kerotest furnished a total of 759 sets of refrigeration valves and fittings to this market alone, or 81.4% of the total—a significant indication of the widespread preference for Kerotest Refrigeration Valves and Fittings in modern air conditioning as well as mechanical refrigeration.

Kerotest Manufacturing Co.
Pittsburgh Pa.

LOCAL REPRESENTATIVES
(Stocks Maintained for Immediate Delivery)

Atlanta, Ga. .....285 Marietta St.
J. M. Tull Metal & Supply Co., Inc.
Baltimore, Md. .....108 South St.
Clendenin Bros., Inc.
Boston, Mass. .....145 High St.
A. E. Borden Co.
Brooklyn, N. Y. .....955 Third Ave.
Coleman Electrical Supply Co., Inc.
Buffalo, N. Y. .....64 Peabody St.
Root Neal & Co.
Cambridge, Mass. .....614 Memorial Drive
Melchior, Armstrong, Dessau Co., Inc.
Chicago, Ill. .....1342 Washington Blvd.
Kerotest Manufacturing Company
Chicago, Ill. .....2334-38 So. Michigan Ave.
H. W. Blythe
Cincinnati, Ohio .....Burbank St.
Merkel Bros. Co.
Cincinnati, Ohio .....2118 Spring Grove Ave.
Williams & Co., Inc.
Cleveland, Ohio .....1748 E. 22nd St.
Williams & Co., Inc.
Dallas, Texas .....Jackson & Pearl Sts.
The Electromotive Company
Decatur, Ill. .....133 Williams St.
Field & Shorb Co.
Denver, Colo. .....14th at Lawrence
The Auto Equipment Co.
Des Moines, Ia. .....W. 11th & D.M.U.R.R.
C. L. Percival Co.
Detroit, Mich. .....1203 Stanley Ave.
J. M. Oberc, Inc.
Fernwood, Miss. .....711 N. Tangipahoa St.
Enochs Sales Co.
Greensboro, N. C. .....714 W. Market St.
Home Appliance Service Co.
Houston, Texas .....306 M & M Bldg.
D. C. Lingo Co.
Indianapolis, Ind. .....229 E. South St.
F. H. Langsenkamp Co.
Kansas City, Mo. .....3033 Main St.
Forslund Pump & Machinery Co.
Long Beach, Calif. .....1295 Gaviota Ave.
L. B. Marsh
Los Angeles, Calif. .....1015 E. Sixteenth St.
Kerotest Manufacturing Company
Los Angeles, Calif. .....3109 Beverley Blvd.
Refrigeration Service, Inc.
Milwaukee, Wis. .....512 N. Water St.
Chase Brass & Copper Co., Inc.
Minneapolis, Minn. .....145 N. 10th St.
Chase Brass & Copper Co., Inc.
Minneapolis, Minn. .....422 So. Seventh St.
Refrigeration & Industrial Supply Co., Inc.
Montreal, Que., Canada .....637 Craig St.
Railway & Engineering Specialties, Ltd.
Newark, N. J. .....Jefferson & Chestnut Sts.
McIntire Connector Co.
New Orleans, La. .....813 Poydras St.
Enochs Sales Co.
New York, N. Y. .....300 Fourth Ave.
Melchior, Armstrong, Dessau Co., Inc.
New York, N. Y. .....43 Warren St.
Paramount Electrical Supply Co., Inc.
New York, N. Y. .....3075 Third Ave.
Aetna Supply Co.
Philadelphia, Pa. .....1516 Callowhill St.
Melchior, Armstrong, Dessau Co., Inc.
Pittsburgh, Pa. .....901 Pennsylvania Ave.
Williams & Co., Inc.
Portland, Ore. .....200 No. 13th St.
Harrison Sales Co.
Providence, R. I. .....156 W. Exchange St.
Rhode Island Supply & Engineering Co.
Rochester, N. Y. .....91 Mt. Hope Ave.
Ontario Metal Supply, Inc.
San Francisco, Calif. .....1077 Mission St.
California Refrigerator Co.
San Francisco, Calif. .....380 Brannan St.
Refrigerating & Power Specialties Co.
Seattle, Wash. .....314 Ninth Ave., No.
Harrison Sales Co.
Sioux City, Iowa .....2310 E. Eighth St.
National Refrigeration Service
Springfield, Mass. .....576 Main St.
Home Utilities Service Supplies Co.
St. Louis, Mo. .....3337 Market St.
Kerotest Manufacturing Company
Syracuse, N. Y. .....314 W. Fayette St.
Syracuse Supply Co.
Toronto, Ont., Canada .....82 Ontario St.
Railway & Engineering Specialties, Ltd.
Vancouver, B. C., Canada
Fleck Bros., Limited
Waterloo, Ia. .....Winterbottom Supply Co.

FACTORY REPRESENTATIVES

Buffalo, N. Y. .....204 Sanders Road
T. F. Wilson
Chicago, Ill. .....1342 Washington Blvd.
G. C. Taylor (Local Stock)
Dallas, Texas .....215 So. Pearl St.
Clarence E. Boren
Dayton, Ohio .....257 Springbrook Blvd.
E. J. Kimm
Denver, Colo. .....1210 California St.
Robert L. Chambers
Detroit, Mich. .....18618 Santa Rosa Drive
Thomas B. McLaughlin
Los Angeles, Calif. .....1015 E. Sixteenth St.
Van D. Clothier (Local Stock)
New York, N. Y. .....806 Graybar Building
K. M. Newcum
San Francisco, Calif. ....Merchant Exchange Bldg.
A. W. V. Johnson (Local Stock)
St. Louis, Mo. .....3337 Market St.
Robert H. Spangler

FOREIGN REPRESENTATIVES

Australia.....235 Clarence St., Sydney, N.S.W.
F. C. Lovelock, Ltd.
Europe and South America
Melchior, Armstrong, Dessau Co., Inc.
300 Fourth Ave., New York, N. Y.
Puerto Rico
Refrigeration Supply Co.
P. O. Box 328, Puerta de Tierra, San Juan

KEROTEST

Crosley

Crosley Radio Corp., Cincinnati, Ohio.

Cabinet—One-door cabinet with wood frame, wood breaker strip, and rubber gasket. Thermocraft and Balsam Wool insulation. Thickness in FR-20 and FR-30: top 2 in., sides 2-1/16 in., bottom 2⅝ in., back 1⅞ in., door 1⅜ in.; FA-40: top and bottom 2¾ in., sides and back 2⅞ in., door 1⅝ in.; FA-50 and PFA-50: top 2⅜ in., sides and back 3⅛ in., bottom 3⅝ in., door 1⅝ in.; FA-60 and PFA-60: top 2¾ in., sides and back 3½ in., bottom 3¼ in., door 1⅞ in.; FA-70 and PFA-70: top 2⅜ in., sides, bottom, and back 3½ in., door 2 in.; F-43 and P-43: top and bottom 2¾ in., sides and back 2⅞ in., door 1⅝ in.; F-55 and PF-55: top 2¾ in., sides, bottom, and back 3¼ in., door 1⅞ in.; F-70 and P-70: top, 2¾ in., sides, bottom, and back 3½ in., door 2 in. Stamped brass chromium-plated hardware.

Compressor—Models FR-20 and FR-30 rotary type driven at 1,700 r.p.m. All others semi-hermetically sealed, reciprocating compressors which can be opened for service, 535 r.p.m., except models F-70 and P-70, 600 r.p.m. One-cylinder, with 1½ in. bore, 1⅜ in. stroke. Rotary compressor—direct drive. Reciprocating—belt drive.

Control—Tagliabue manual temperature control with defrosting position.

Condenser—Crosley fan-cooled, fin-tube condenser.

Motor—Delco capacitor-start.

Evaporator—Crosley stamped steel evaporator. Copper ice tray shelf. Capillary tube refrigerant control.

Guarantee—Cabinet and system 1 year.

Special Features—Shelvador in all models. Interior light in all but FR-20 and FR-30. Shelvatray, Shelvabasket, Storabin, and ventilated front on F and PF models.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIGERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
FR-20	2.0	$ 79.50	...	1/6	Thermon*	...	L 36 x 23⅝ x 25 P	5.2	2	2	42	2.6
FR-30	3.02	94.50	...	1/6	Thermon*	...	L 36 x 23⅝ x 25 P	7.0	3	2	42	2.6
FA-40	4.09	112.50	100	1/6	SO_2	...	L 52¾ x 23½ x 25½ P	8.6	3	2	42	2.6
FA-50	5.00	129.50	100	1/6	SO_2	...	L 56¼ x 25⅞ x 24½ P	11.3	3	3	42	2.6
PFA-50	5.00	152.00	100	1/6	SO_2	...	P 56¼ x 25⅞ x 24½ P	11.3	3	3	42	2.6
FA-60	6.00	149.50	100	1/6	SO_2	...	L 56¼ x 30⅜ x 25⅜ P	13.5	4	4	63	3.9
PFA-60	6.00	174.50	100	1/6	SO_2	...	P 56¼ x 30⅜ x 25⅜ P	13.5	4	4	63	3.9
FA-70	7.08	169.50	100	1/6	SO_2	...	L 57½ x 32¾ x 25⅞ P	14.9	4	5	84	5.2
PFA-70	7.08	194.50	100	1/6	SO_2	...	P 57½ x 32¾ x 25⅞ P	14.9	4	5	84	5.2
F-43	4.30	139.50	100	1/6	SO_2	...	L 56½ x 23⅞ x 23½ P	9.15	4	3	42	2.6
PF-43	4.30	159.50	100	1/6	SO_2	...	P 56½ x 23⅞ x 23½ P	9.15	4	3	42	2.6
F-55	5.51	164.50	100	1/6	SO_2	...	L 57⅛ x 29 x 24⅞ P	11.6	4	4	63	3.9
PF-55	5.51	187.00	100	1/6	SO_2	...	P 57⅛ x 29 x 24⅞ P	11.6	4	4	63	3.9
F-70	7.08	189.50	110	1/5	SO_2	...	L 58⅞ x 32¾ x 25⅞ P	14.9	4	5	84	5.2
PF-70	7.08	219.50	110	1/5	SO_2	...	P 58⅞ x 32¾ x 25⅞ P	14.9	4	5	84	5.2

*Dichloromonofluoromethane.

Leonard

Leonard Refrigerator Co., Detroit, Mich.

Cabinet—Leonard 1-door cabinet on all but model PD-1059 which has 2 doors. Wood frame, composition breaker strip, rubber gasket. Thickness of insulation—models LA and SL-435 top, door and bottom 2½ in., sides 2 in., back 2¾ in.; model L-300 top, sides, and back 2¾ in., door 2½ in., bottom 2¼ in.; model LX-275 top, door, and bottom 2½ in., sides 2 in., back 2¾ in.; models PD-896 and PD-1059, 3 in. throughout; all other models 2½ in. throughout. Grand Rapids Brass chromium-plated hardware.

Compressor—Leonard open-type reciprocating compressor. 1-cylinder on models LX-275, L-300, LA, SL-435, SL-525, SP-525, and LD-553; all others 2-cylinder. 1¼-in. bore, 1½-in. stroke. Belt drive. Compressor speed 525 r.p.m. for all 1-cylinder models; 410 r.p.m. for all 2-cylinder models except models PD-896 and PD-1059, which are driven at 525 r.p.m. and 640 r.p.m., respectively. Bellows shaft seal. Compressor below food compartment. Refrigerant charge—2 lbs. 6 oz. to 3 lbs. 4 oz. Special refrigeration oil lubrication—1 lb. to 1 lb. 10 oz.

Control—Ranco automatic temperature control with semi-automatic defrosting.

Motor—Delco condenser start and capacitor transformer. Oil annually.

Evaporator—Leonard welded-shell steel evaporator. High side float refrigerant control. Aluminum and rubber ice cube trays.

Condenser—Leonard fan-cooled continuous fin tube condenser.

Guarantee—System and cabinet, 1 year. Serviced by dealers only.

Special Features—Interior electric light, vegetable crisper, convenience bracket, ice tray lifter, easy cube ice tray, Len-A-dor, sliding shelf, hinge shelf, cold chest.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. B.T.U.	MOTOR HP.	REFRIGERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
LX-275	2.75	$.....	680*	1/6	SO_2	260	L 35⅜ x 24⅛ x 25 P 15½ x 19¾ x 17	6.03	2	2	42	4½
L-300	3.00	99.50	680	1/6	SO_2	285	L 48¾ x 24⅜ x 20½ P 23½ x 18⅜ x 13⅞	7.91	4	2	42	4½
LA	4.25	119.50	680	1/6	SO_2	312	L 47⅞ x 24⅜ x 24⅛ P 24⅛ x 19¾ x 17	8.34	3	2	42	4½
SL-435	4.35	134.50	680	1/6	SO_2	328	L 51⅜ x 25⅛ x 24⅝ P 24⅛ x 19¾ x 17	8.34	3	2	42	4½
SL-525	5.25	158.50	680	1/6	SO_2	373	L 52⅞ x 28½ x 26 P 24⅝ x 22⅛ x 17¾	10.05	3	3	63	6¾
SL-600	6.00	187.50	1030	1/6	SO_2	400	L 55¼ x 28½ x 26 P 27 x 22⅛ x 18⅝	12.89	5	4	83	9
SL-721	7.21	224.50	1030	1/6	SO_2	438	L 57⅛ x 31¾ x 26 P 28⅛ x 25¼ x 18⅝	14.73	5	4	83	9
SP-525	5.25	184.50	680	1/6	SO_2	402	P 52⅞ x 28½ x 26 P 24⅝ x 22⅛ x 17⅞	10.05	3	3	63	6¾
SP-600	6.00	217.50	1030	1/6	SO_2	408	P 55¼ x 28½ x 26 P 27 x 22⅛ x 18⅝	12.89	5	4	83	9
LD-553	5.53	197.50	680	1/6	SO_2	387	L 52¾ x 28½ x 25⅝ P 24⅝ x 22⅛ x 18⅝	10.45	3	3	62	6¾
PD-588	5.88	247.50	1030	1/6	SO_2	431	P 55¼ x 28½ x 25⅝ P 27 x 22⅛ x 18⅝	13.67	6	3	81	10½
PD-704	7.04	279.50	1030	1/6	SO_2	469	P 57⅛ x 31¾ x 25⅝ P 28⅛ x 25¼ x 18⅝	16.14	6	4	108	14
PD-896	8.96	334.50	1300	1/4	SO_2	534	P 63⅞ x 33¼ x 26⅛ P 35⅛ x 25¼ x 18⅝	19.45	7	4	108	14
PD-1059	10.59	389.50	1550	1/4	SO_2	680	P 64⅛ x 40⅜ x 26⅛ P 34½ x 32⅝ x 18	21.88	5	5	108	20

*Compressor capacity given in B.t.u.'s per hour with 90° F. ambient temperature, 20° F. saturated suction temperature, and refrigerant vapor temperature entering the compressor 65° F.

Norge

Norge Corp., Detroit, Mich.

Cabinet—Norge 1-door cabinet for all except models P-953 and P-1117. Wood frame, wood breaker strip, rubber gasket. Norge approved insulation. Chromium-plated hardware.

Compressor—Norge open-type rotary compressor. Belt-driven. Bellows shaft seal. Compressor below food compartment.

Control—Manual temperature control, with manual defrosting.

Motor—Capacitor-type motor.

Condenser—Fan-cooled fin tube condenser.

Evaporator—Norge shell and tube copper and brass evaporator, low side float refrigerant control. Aluminum and rubber ice cube trays.

Guarantee—Cabinet and system, 1 year. Serviced by dealers only.

Special Features—Defrosting tray. Models E-425 and all L and P models, electric light; L and P models, 621, 720, and 804, adjustable shelves. Accessory set of six dishes for model E-425 and all L and P models.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIGERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
T-20	2.0	*$ 79.95	...	1/6	SO_2	200	† 36 x 22¾ x 21 P 15¾ x 19¼ x 15⅛	5.25	2	2	36	2¾
E-425	4.25	119.50	...	1/6	SO_2	232	† 51¾ x 24 x 22⅜ P 25⅜ x 19½ x 16¼	8.49	3	2	42	4½
P-519	5.19	174.50	...	1/6	SO_2	303	P 54¾ x 26⅞ x 25¼ P 27⅜ x 21 x 17	10.03	3	3	72	7¼
L-519	5.19	149.50	...	1/6	SO_2	288	† 54¾ x 26⅞ x 25¼ P 27⅜ x 21 x 17	10.03	3	3	72	7¼
P-621	6.21	213.50	...	1/5	SO_2	340	P 58¾ x 28½ x 25¼ P 31⅝ x 21⅞ x 16¾	12.63	5	3	96	9¾
L-621	6.21	183.50	...	1/5	SO_2	328	† 58¾ x 28½ x 25¼ P 31⅝ x 21⅞ x 16¾	12.63	5	3	96	9¾
P-720	7.20	249.50	...	1/5	SO_2	352	P 58¾ x 31½ x 25¼ P 31⅛ x 24⅞ x 17¼	14.15	5	3	96	9¾
L-720	7.20	214.50	...	1/5	SO_2	343	† 58¾ x 31½ x 25¼ P 31⅛ x 24⅞ x 17¼	14.15	5	3	96	9¾
P-804	8.04	289.50	...	1/4	SO_2	395	P 60¾ x 32½ x 27¼ P 32½ x 25 x 18¼	15.59	5	4	120	12⅜
L-804	8.04	254.50	...	1/4	SO_2	372	† 60¾ x 32½ x 27¼ P 32½ x 25 x 18¼	15.59	5	4	120	12⅜
P-953	9.53	319.50	...	1/4	SO_2	470	P 60¾ x 40⅞ x 27¼ P 31½ x 33 x 17¼	19.51	6	4	120	12⅜
P-1117	11.17	369.50	...	1/4	SO_2	541	P 60¾ x 48⅝ x 27¼ P 31½ x 40¾ x 17¼	23.11	6	7	192	20¼

*Suggested zone 1 installed price. †Norglos for T-20, E, L, and S models.

Westinghouse

Westinghouse Electric & Mfg. Co.
Refrigeration Div., Mansfield, Ohio.

Cabinet—Westinghouse cabinet, 1 door on all but model AP-200, which has four. Steel frame, Micarta breaker strip, rubber gasket. Balsam Wool insulation 3 in. thick throughout on all models except D42 where thickness in top is 3 in., sides 2¾ in., door 3 in., back and bottom 2½ in.; models DL44 and DP44 where thickness is top, back, door, and bottom, 3 in., sides 2¾ in.; models DLX95 and DPX95 where thickness is top, door, and bottom 3 in., sides and back 3½ in.; model DC20 where thickness is sides and door 2 in., bottom 2½ in.; model AP200 where thickness is top and back 4 in., sides 4¼ in., door 3½ in., bottom 3¾ in. Chrome-finished hardware.

Compressor—Westinghouse sealed reciprocating compressor. All models 1-cylinder except model AP200, which has 2 cylinders. 1-in. bore, ⅞-in stroke. Direct driven with compressor speed 1740 r.p.m. Compressor above food compartment. Refrigerant charge—2½ to 3 lbs.

Motor—Westinghouse split-phase motor.

Guarantee—System 1 year, with 4 years additional warranty on hermetic mechanism; cabinet, 1 year. Serviced by dealers only.

Evaporator—Westinghouse welded tubeless Sanalloy evaporator. High side float control. Aluminum trays, one Ejectocube tray in all DLX and DPX models.

Control—Westinghouse automatic temperature control, semi-automatic defrost.

Condenser—Westinghouse fan-cooled condensers.

Special Features—Ice tray release and bottle opener all models except D42. Rotating shelf, built in vegetable, fruit and dairy baskets, and folding tray on door on all DLX and DPX models.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIGERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
D-42	4.4	*$129.50	....	1/8	SO_2	270	D 55⅞ x 24½ x 24⅞ P 29⅞ x 18 x 15¼	8.3	3	2	44	4½
D-54	5.4	169.50	....	1/8	SO_2	325	D 58 x 27⅜ x 25⅜ P 31¼ x 20¾ x 15¼	10.1	3	3	80	8
D-65	6.5	211.00	....	1/8	SO_2	360	D 60¾ x 28⅞ x 26⅜ P 34¼ x 21⅞ x 16	11.7	3	6	118	12¼
DL-44	4.4	154.50	....	1/8	SO_2	325	D 56½ x 24 x 26¼ P 29⅞ x 18 x 15¼	9.0	3	3	80	8
DP-44	4.4	174.50	....	1/8	SO_2	365	D 56½ x 24 x 26¼ P 29⅞ x 18 x 15¼	9.0	3	3	80	8
DL-54	5.4	189.50	....	1/8	SO_2	350	D 58 x 26¾ x 26¼ P 31¼ x 20¾ x 15¼	10.1	3	3	80	8
DP-54	5.4	224.50	....	1/8	SO_2	390	D 58 x 26¾ x 26¼ P 31¼ x 20¾ x 15¼	10.1	3	3	80	8
DL-67	6.7	224.50	....	1/8	SO_2 or Freon	370	D 61 x 28⅜ x 27⅛ P 34¼ x 21⅞ x 16⅛	11.8	3	6	118	12¼
DP-67	6.7	264.50	....	1/8	SO_2 or Freon	420	D 61 x 28⅜ x 27⅛ P 34¼ x 21⅞ x 16⅛	11.8	3	6	118	12¼
DL-78	7.8	254.50	....	1/8	SO_2 or Freon	405	D 61¼ x 31⅝ x 27⅛ P 34½ x 25 x 16⅛	13.2	3	6	118	12¼
DP-78	7.8	294.50	....	1/8	SO_2 or Freon	455	D 61¼ x 31⅝ x 27⅛ P 34½ x 25 x 16⅛	13.2	3	6	118	12¼
DLX-67	6.7	269.50	....	1/8	SO_2 or Freon	395	D 61 x 28⅜ x 27⅛ P 34¼ x 21⅞ x 16⅛	11.0	3	5	116	11¾
DPX-67	6.7	309.50	....	1/8	SO_2 or Freon	440	D 61 x 28⅜ x 27⅛ P 34¼ x 21⅞ x 16⅛	11.0	3	5	116	11¾
DLX-78	7.8	289.50	....	1/8	SO_2 or Freon	425	D 61¼ x 31⅝ x 27⅛ P 34½ x 25 x 16⅛	12.3	3	5	116	11¾
DPX-78	7.8	334.50	....	1/8	SO_2 or Freon	475	D 61¼ x 31⅝ x 27⅛ P 34½ x 25 x 16⅛	12.3	3	5	116	11¾
DLX-95	9.5	319.50	....	1/6	SO_2	470	D 66¼ x 33¼ x 28 P 38½ x 25¾ x 17¼	15.8	4	5	116	11¾
DPX-95	9.5	369.50	....	1/6	SO_2	530	D 66¼ x 33¼ x 28 P 38½ x 25¾ x 17¼	15.8	4	5	116	11¾
DC-20	2.1	86.50	....	1/8	SO_2	190	D 36 x 22⅛ x 22¾ P 13⅜ x 17⅞ x 16	2.7	.	1	22	2¼
AP-200	20.1	594.50	....	1/4	SO_2	760	D 76 x 51 x 30¾ P 50⅛ x 40¼ x 18¾	37.7	11	7	192	21

*Eastern zone prices, installed.

SPECIFICATIONS OF AIR-CONDITIONING EQUIPMENT IN MARCH 27 ISSUE

Appliance Selling Opens New Field To Hardware Men

(*Concluded from Page 9, Column 5*)

but I assure you that I am most sincere and not playing for applause.

First of all, the hardware industry is one of our oldest and most firmly established. Your communities know you; you have for years been a part of them and served them along many and varied lines. I am happy to say that, by and large, the credit standing of the hardware industry is well above that of many others. Your stores are usually excellent and well located.

Now, if those are not enough nice things, I will add my crowning compliment—that, in spite of being one of our oldest established industries in which your fathers and grandfathers did business before chain stores and department stores were even thought of—in spite, I say, of this—you have grasped the changed trends of merchandising, and today the uptodate hardware store is a model for all that stands for the best in modern selling and public appeal.

Suitable for Hardware Dealer

Let's ask the question—is there anything about electrical merchandising that makes it in any way unsuitable for the hardware merchant to handle?

We all know that it fits in perfectly with your other lines of merchandise. Those electrical appliances are ideal for display and they carry very satisfactory profits. Most of them are already firmly established in the minds of your customers.

The iron, the toaster, the percolator, and even the waffle iron are standard articles in almost all households. Furthermore, all these articles have a considerable replacement market due to their wearing out, or to changes in styles, or improvements. This is best borne out by the fact that, although 10 years ago approximately 90 per cent of all wired homes had an electric iron, yet ever since that time we have been selling over two million new irons per year to the American public.

Then there are constantly new items being added to our electric appliance line and coming into popularity. But don't stop with table devices. An aggressive hardware dealer can build up a good business in vacuum cleaners, washing machines, ironers, and last but by no means least, that giant of the electric appliance industry—the electric refrigerator.

Now it is perfectly possible for you hardware merchants to get some electric appliances and display them in your store, and wait for some customer to suggest your selling one of them, but, gentlemen, that's not the way for my hardware friends to make money in electrical merchandise. *You have to sell them.*

Has to Learn Vocabulary

A little while ago I said a lot of nice things about the hardware merchant. Now I am going to tell you about the only serious fault which I have to find with my hardware friends. You have learned the art of window dressing; your stores are very attractive, but you and your clerks either haven't got a proper vocabulary or you are too bashful to use it!

The hardware store has come a long way in developing the art of service to customers but is still far behind other merchants in trying to convert a one-purchase customer into a two or three purchase customer.

How often do your clerks say to Mrs. Smith who has come in to buy some article or hardware, "I want to show you a wonderful new roaster that we have," or, "Do you know that with one of these new electric irons you can save a lot of time and effort in your ironing?"

Perhaps you think I am unfair in this statement, but not long ago I made a little test and, as a result, Mrs. Allen had to buy 12 boxes of tacks in 12 different hardware stores before she was asked in any one of them to buy anything else. In the thirteenth store the clerk asked her to buy a 50 cent bottle capper, and apparently he didn't realize that prohibition had been repealed and that we were no longer brewing our own.

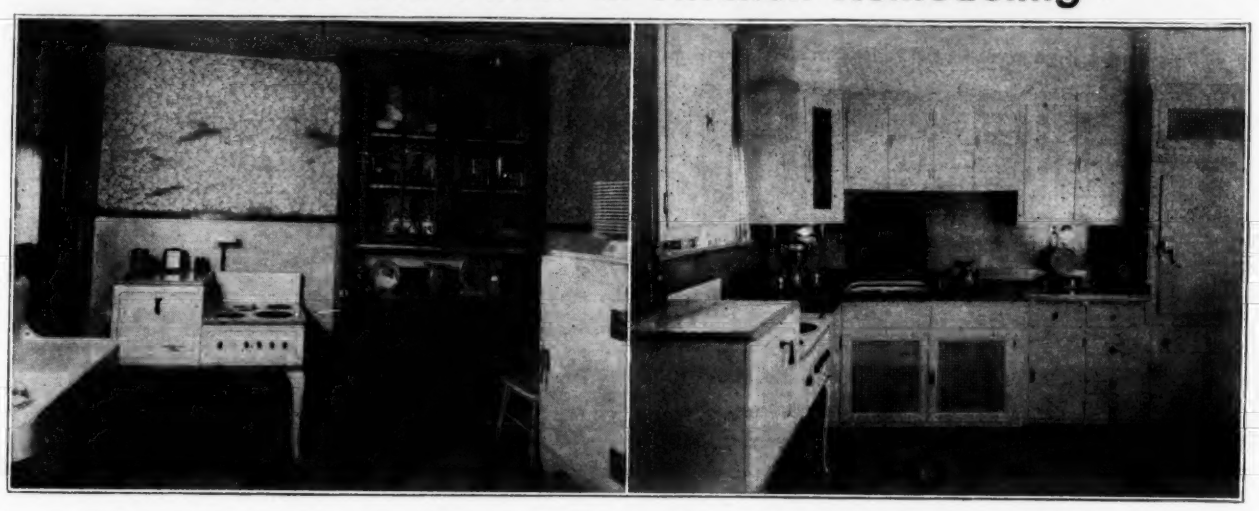
Now, in conclusion—we are already feeling the beginning of a greatly stimulated buying of electric appliances of all kinds. From every side the public is being educated in the advantages of electricity and invited to buy appliances.

Publicity a Big Factor

The government publicity alone is a tremendous factor. Financing by the Electric Home and Farm Authority, while it is now limited to certain areas, may be spread out more widely in the near future. More publicity and financing is offered by the Federal Housing Commission.

Add to this government activity the millions of dollars of publicity of all kinds that is being put before the public daily by the utilities and electrical manufacturers.

Before and After in Kitchen Remodeling



R. A. Scholl, sales promotion manager for Judson C. Burns, Philadelphia General Electric distributor, is one salesman who believes in practicing what he preaches—so he transformed the kitchen in his home into an all-electric one through the use of General Electric equipment. At the left, the Scholl kitchen before its transformation; at the right, the same kitchen, after the G-E equipment had been installed.

Crosley Distributor Uses Ice Pick To Obtain New Prospects

BUFFALO—An ice pick worth a dollar in payment on a Crosley refrigerator was offered, free of charge, to all persons requesting it, as a feature in the advertising campaign conducted by the Ontario Electric Corp., Crosley distributor here, in cooperation with eight Crosley dealers.

This offer was used as an attention getter in an advertisement displaying the Shelvador conveniences, with adjoining dealer ads.

To obtain the ice pick the reader had only to write his name and address in the blank printed in the advertisement, and present this blank to a Crosley dealer. Upon returning the ice pick to the dealer, at any future time, the "prospect" will be given one dollar credit on a new Crosley Shelvador.

Over 500 picks were given away in the first three days, and the dealers who tied in with the advertisement, have already sold some Shelvadors as a result of the stunt, reports J. L. Block, president, Ontario Electric Corp.

This promotion plan is being repeated in the March advertising campaign, with 20 dealers tying in, Mr. Block said.

Refrigeration Gaining Ground in Hawaii

CINCINNATI—R. A. Howe, president, R. A. Howe & Co., Honolulu, Crosley distributor for the Hawaiian Islands, visiting the Crosley factory here, reports that electric refrigeration is rapidly gaining in popularity in the islands.

Mr. Howe explains the reluctance of island inhabitants to accept electric refrigeration heretofore by pointing out their loyalty to the ice companies that had served them so long.

"Now that electric refrigerators are in more universal use, it will not be long until all people who are supplied with electricity will own electric refrigerators," Mr. Howe believes.

"There is no doubt that they are more economical. Located as we are, far away from the supply of fresh vegetables and such fruits as are not produced in Hawaii, the preservation of food stuffs is vitally important. It is not hard to convince a customer of the advantage to be gained in owning a refrigerator that takes care of this problem."

G-E Salesman Sells $567 Order To One Customer

SPRING PLACE, Ga.—Joe Wheeler, salesman, recently sold six major appliances—two G-E refrigerators, two Hotpoint water heaters, one Hotpoint range, and a Gould pump—on the same order to one customer, reports O. P. Galt, Canton district manager of the Georgia Power Co., Atlanta. Total amount was $567.40.

Electric Invisible Kitchen Co. in New Quarters

CHICAGO — Electric Invisible Kitchen Co., recently moved to Suite 1156 LaSalle-Wacker Bldg., 221 North LaSalle St. Two new models of Electric Invisible Kitchens are shown as part of the complete line displayed in the demonstration room at the new location.

Dalton Electric Co. New Ice-O-Matic Distributor

JACKSONVILLE, Fla.—The Dalton Electric Co., here, has been appointed a Williams Ice-O-Matic distributor to handle all Ice-O-Matic refrigeration lines, officials announced recently.

Norge Advertising To Stress Food Savings Made Possible by Refrigerator

DETROIT — Economies which an electric refrigerator makes possible in the face of steadily advancing food costs will be a feature of Norge's spring advertising campaign, soon to get under way, according to Howard E. Blood, president of Norge Corp.

"The amazing public demand for electric refrigeration this early in the year," Mr. Blood said, "is perhaps due to the rise in food prices. February food prices were up 38.8 per cent, compared with those of the corresponding month in 1934.

"More interesting, perhaps, is the fact that the increase was greatest among perishables. Beef ribs were 52.9 per cent higher, while the price of flour was up only 8.4 per cent.

"These price increases can be largely offset by owning an electric refrigerator and taking advantage of Saturday food specials. There is a decided trend to the ownership of larger refrigerators, indicating that the public is aware of the savings from elimination of food spoilage, use of leftovers, and quantity buying."

Stewart-Warner Is Holding National "Poker" Contest

CHICAGO — Stewart-Warner distributors and dealer salesmen are competing in a nation-wide "Poker" sales contest which began Saturday, March 16, and will close midnight, May 15.

For each of the first two refrigerators he sells, the contestant receives two cards; for each additional refrigerator thereafter during the contest, he receives one card.

Any possibility of trading in cards is precluded by writing the salesman's name across the card in indelible ink and mailing it to him in a sealed envelope.

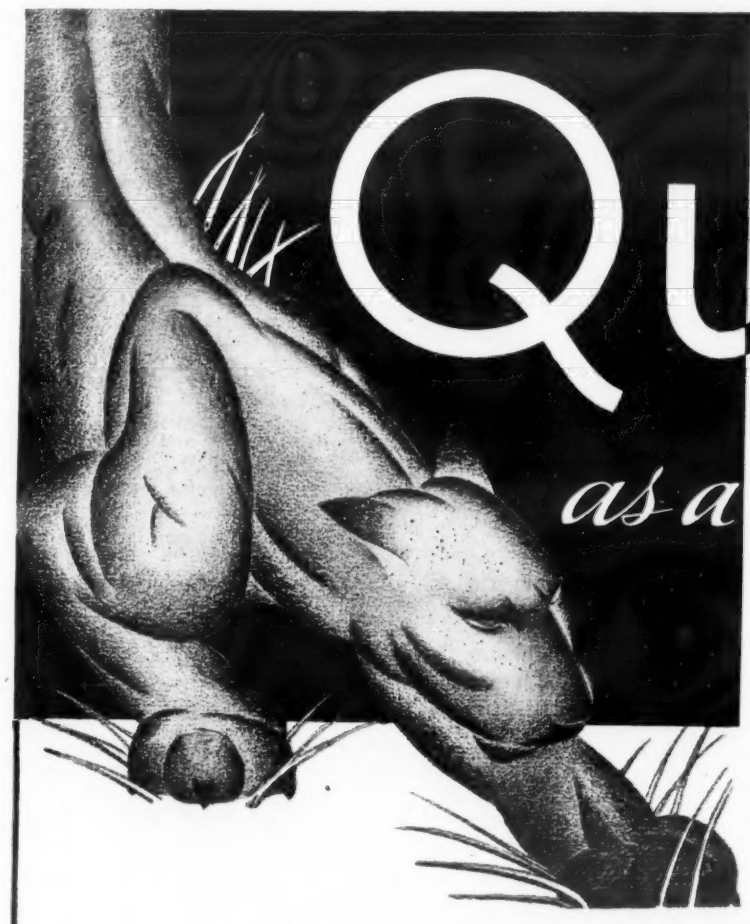
At close of the contest, players will make up their best five-card poker hands and submit them for jack-pot first prize. Nineteen jack-pot prizes will be awarded in each of the three national sales territories. Additional merchandise prizes will be awarded on basis of total number of cards earned.

Distributor salesmen's contest ties in with the dealers' poker game. Fifteen grand prizes will be awarded on the basis of accomplishment.

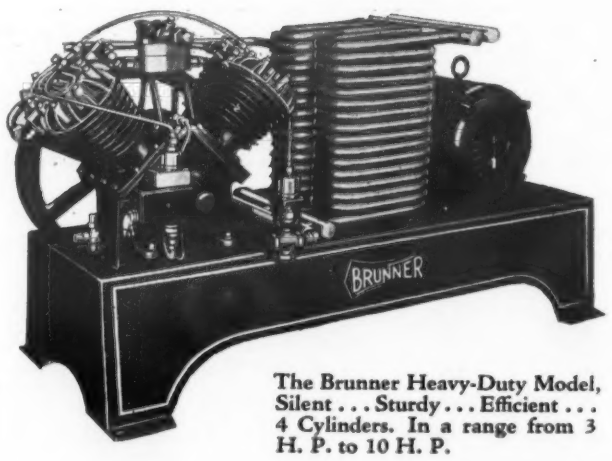
Former F-M Engineer Starts Own Firm

CHICAGO — John W. Million, Jr., has resigned as treasurer and chief engineer of Fairbanks-Morse Home Appliances, Inc., to establish his own firm, the Million Radio & Television Laboratories, with offices here.

Mr. Million will act as consulting engineer for radio and electric manufacturing organizations.



QUIET as a Stalking Panther



The Brunner Heavy-Duty Model, Silent . . . Sturdy . . . Efficient . . . 4 Cylinders. In a range from 3 H. P. to 10 H. P.

● The smooth, silent operation of Brunner refrigeration units is no secret. It is explained by the *skillfully balanced design* of Brunner Compressors . . . a design which not only eliminates noisy vibration, but also brings wear down to a money-saving minimum. Get the whole Brunner story and see why Brunner is "the Fastest Growing Name in the Industry." You'll find in this complete line of Highsides and Compressors practical units . . . ranging from 1/6 H. P. to 15 H. P.; air and water cooled . . . for every refrigeration need, including four NEW heavy-duty highsides for big commercial jobs.

Your copy of the New Brunner Refrigeration Catalog is ready to be mailed. Just drop us a card! Brunner Manufacturing Co., Utica, N. Y., U. S. A.

Brunner

A NAME BUILT BY 29 YEARS OF SERVICE

Atwater Kent

Atwater Kent Mfg. Co., Philadelphia, Pa.

Cabinet—Rex 1-door cabinet, wood frame, composition material for breaker strip, rubber gasket. Balsam wool insulation in model R-334, 2 in. throughout; model R-615, 2½ in.; other models, 3 in. Chromium-plated hardware.

Compressor—Open-type reciprocating 1-cylinder Atwater-Kent compressor with 1½-in. bore and 1¼-in. stroke with compressor speed of 430 r.p.m. with belt drive. Compressor below food compartment. Diaphragm shaft seal. Refrigerant charge—1 lb. Lubrication—5 oz. Water White lubricant.

Control—Ranco manual temperature control. Manual defrosting with automatic return on all but model 334.

Evaporator—Mullins stamped evaporator, porcelain exterior. Thermostatic control. Detroit Lubricator thermostatic expansion valve. Ice trays of anodically treated aluminum and rubber. Ice tray release.

Motor—G-E capacitor motor. Oil every six months.

Condenser—Bush fan-cooled continuous fin tube condenser.

Guarantee—System and cabinet 1 year. Serviced by dealers only.

Special features—Food rack on door; torque belt tightener on models R-256 and R-547.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
R-334	4.32	$.....	120	1/6	CH_3Cl	210	* 53¼ x 23⅞ x 22¼	P 26½ x 19½ x 16	8.5	3	2	63	4.5
R-615	5.16	.....	120	1/6	CH_3Cl	270	* 56 x 26¾ x 24	P 27¾ x 20¼ x 16½	11.03	5	3	84	6
R-256	6.15	.....	120	1/6	CH_3Cl	304	* 58½ x 29¾ x 24½	P 30¼ x 22½ x 16½	13.04	5	3	112	8
R-547	7.13	.....	120	1/6	CH_3Cl	328	* 59⅞ x 32 x 24½	P 31½ x 24¾ x 16½	14.31	5	3	112	8

*Porceloid finish.

Copeland

Copeland Refrigeration Corp., Detroit.

Cabinet—Truscon 1-door cabinet, wood frame, Panelyte breaker strip, rubber gasket. Zerotex insulation. Thickness of insulation—model 435 top, sides, back, and bottom, 2 in., door, 2½ in.; model 535, top, sides, and back, 2½ in., door, 3 in., bottom, 2¾ in.; model 635 and 835, top, sides, back, and door, 3 in., bottom, 3½ in. Grand Rapids Brass chromium-plated hardware.

Compressor—Copeland open-type reciprocating 1-cylinder compressor. Bore 1½ in. on all except model 955, which has 2-in. bore. Stroke 1½ in. Belt-driven with compressor speed 360 r.p.m. for all except model 755, which has compressor speed of 400 r.p.m. Balanced bellows shaft seal. Compressor below food compartment. Refrigerant charge—1¼ lbs. Lubrication—⅞-pt Suniso oil.

Control—Penn automatic temperature control with manual defrosting.

Motor—Delco or Wagner motor, with condenser start. Oil motor every 6 months.

Evaporator—Mullin steel evaporator with porcelain coated shelves. Thermostatic control. Detroit Lubricator expansion valve. Aluminum and rubber ice cube trays.

Condenser—Long fan-cooled fin tube condenser.

Guarantee—Cabinet and system, 1 year. Serviced by dealers only.

MODEL NO.	CU. FT.	F.O.B. PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
505	4.5	$114.00	100	1/6	CH_3Cl	...	L 54¼ x 23¾ x 20¼	P 26¾ x 19½ x 16¼	7.6	3	3	63	6
635	5.5	170.00	100	1/6	CH_3Cl	...	L 58¼ x 26¼ x 22	P 29 x 21 x 17	11.7	4	3	84	8
755	6.6	193.00	110	1/6	CH_3Cl	...	L 60 x 30 x 23	P 30 x 23¾ x 17½	14.0	4	3	84	8
955	8.8	228.00	150	1/5	CH_3Cl	...	L 62⅝ x 32¾ x 24	P 33½ x 26½ x 18½	16.8	4	4	112	10

Fairbanks-Morse

Fairbanks-Morse Home Appliances, Inc. Chicago, Ill.

Cabinet—One-door cabinet with Conservador. Thermocraft insulation thickness in model B-4—top, sides, back, bottom 2 in., door 3 in.; B-5—top and door 3 in., sides, back, and bottom 2½ in.; B-6—top 2¾ in., sides, back, bottom, and door 3 in.; B-8—top and sides 3¼ in., back and bottom 3½ in., door 3 in. Semi-concealed chromium-plated hardware.

Compressor—One-cylinder, belt-driven, reciprocating compressor with 1½ in. bore and 1-7/16 in. stroke, driven at 500 r.p.m., except for model B-8 which has two cylinders and is driven at 350 r.p.m. Mounted under food compartment.

Control—Manual temperature control with defrost and vacation cycle motor.

Motor—Capacitor motor. Oil semi-annually.

Special Features—Conservador on all models. Electric light all except B-4.

Condenser—Fan-cooled fin tube.

Evaporator—Brass and copper, tubular type. Expansion valve refrigerant control.

Guarantee—Cabinet and system 1 year.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
B-4	4.14	*$139.50	115	1/6	SO_2	265	D 50½ x 23¼ x 21¾	P 24½ x 18¾ x 17⅛	9.25	..	2	42	5
B-5	5.11	189.50	115	1/6	SO_2	278	D 55½ x 25⅝ x 22⅝	P 29⅛ x 19¾ x 17⅛	10.55	..	3	63	7½
B-6	6.01	219.50	115	1/6	SO_2	323	D 55½ x 28⅞ x 23⅛	P 29⅞ x 22 x 17⅛	12.55	..	3	63	7½
B-8	8.01	289.50	160	1/5	SO_2	356	D 58½ x 34 x 23⅝	P 32⅜ x 26⅝ x 17⅛	15.76	..	4	84	10

*New York retail price.

Gibson

Gibson Electric Refrigerator Corp. Greenville, Mich.

Cabinet—Gibson 1-door cabinet, wood frame, Panelyte breaker strip, rubber gasket. Gibsonite insulation. Thickness of insulation in model B-4 and BX-4—top, sides, back, and bottom 2 in.; door, 2¼ in.; model B-475, 2½ in. throughout; models L-575 and P-575—top and back, 2⅜ in.; sides and bottom, 3 in.; door, 2½ in.; models L-705 and P-705—top and back, 2⅞ in.; sides and door, 3 in.; bottom, 3½ in.; models L-835 and P-835—top, 3⅝ in.; sides, 3¼ in.; back, 3⅝ in.; door, 3 in.; bottom, 4 in. Grand Rapids Brass hardware, chromium plated.

Compressor—Gibson open-type reciprocating compressor for "B" models and Gibson hermetically sealed reciprocating compressor for "L" and "P" series. All models 2 cylinders. Open-type units belt driven, sealed units direct driven. Compressor speed open type units 1,000 r.p.m., sealed units, 1,740 r.p.m. Bore 1-1/16 in., stroke, ⅝ in. Compressor below food compartment. Refrigerant charge, 28 to 56 oz. Lubrication, 16 oz. Sunoco oil.

Control—Ranco automatic temperature control, with semi-automatic defrosting.

Motor—Delco or G-E capacitor start. Oil every 6 months on open-type units.

Evaporator—Gibson plate-type shelf copper evaporator. High side float refrigerant control. Anodically aluminum ice trays. Ice tray release.

Condenser—McCord fan-cooled fin tube.

Guarantee—System and cabinet 1 year. Serviced by dealers and independent service firms.

Special Features—Twin dairy kits, Util-A-Rac, Krisperator, Veg-A-Dor, lift-out shelf, twin chilling trays, Pres-toe door opener.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
B-4	4.0	$.....	...	1/8	SO_2	166	L 43⅝ x 23⅞ x 26⅝	P 19 x 19½ x 19½	5.53	1	1	21	1¼
BX-4	4.0	.....	...	1/8	SO_2	204	L 43⅝ x 23⅞ x 26⅝	P 19 x 19½ x 19½	9.84	2	3	63	5¼
B-475	4.75	.....	...	1/8	SO_2	245	L 52⅜ x 23⅞ x 27¾	P 26⅞ x 18½ x 18½	11.1	3	3	63	5¼
L-575	5.25	.....	...	1/5	SO_2	273	L 52⅞ x 25 x 26¾	P 30½ x 19 x 17⅛	10.4	3	4	126	11
P-575	5.25	.....	...	1/5	SO_2	273	P 52⅞ x 25 x 26¾	P 30½ x 19 x 17⅛	10.4	3	4	126	11
L-705	6.5	.....	...	1/5	SO_2	308	L 56 x 28⅞ x 26¾	P 33⅛ x 22⅞ x 16⅛	14.1	4	5	147	12¾
P-705	6.5	.....	...	1/5	SO_2	308	P 56 x 28⅞ x 26¾	P 33⅛ x 22⅞ x 16⅛	14.1	4	5	147	12¾
L-835	7.75	.....	...	1/5	SO_2	337	L 59½ x 30⅝ x 28¼	P 35½ x 24⅛ x 16⅞	15.5	4	5	168	15
P-835	7.75	.....	...	1/5	SO_2	337	P 59½ x 30⅜ x 28¼	P 35½ x 24⅛ x 16⅞	15.5	4	5	168	15

Grunow

General Household Utilities Co. Chicago, Ill.

Cabinet—Grunow 1-door cabinet, steel and wood frame, Bakelite breaker strip, rubber gasket. Dry-Zero insulation. Thickness of insulation—model 50-S top, back, and door 2½ in., bottom 2 in., sides 2⅛ in.; model 60-S top, back, sides, and door 2½ in., bottom 3 in.; model 51-D top, back, and sides 2 in., bottom 2½ in., door 2¼ in.; model 54-D top, bottom, back, and sides 2½ in., door 3½ in.; model 61-D top, back, and sides 2½ in., bottom 3 in., door 2¾ in.; model 56-SD top, bottom, back, and sides 2½ in., door 3½ in.; all others, top, bottom, back, and sides 3 in., door, 3½ in. McKinney and Winters & Crampton chromium-plated hardware.

Control—Cutler-Hammer pressure control, automatic defrosting.

Compressor—Grunow sealed rotary unit, direct driven. Refrigerant charge—1 qt. Lubrication charge—1-1/10 qts. vacuum control.

Motor—Grunow capacitor start and run motor.

Evaporator—Grunow brass evaporator, with chromium finish. Float and Carrene meter refrigerant control. Aluminum ice trays. Ice tray release.

Condenser—McCord fan-cooled radiator-type single and double-pass condenser.

Guarantee—System and cabinet, 1 year. Serviced by dealers only.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	SHIPPING WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
50-S	4.8	*$129.50	...	1/6	Carrene	325	L 52 x 24¾ x 24½	P	10.0	4	2	64	4.9
60-S	5.7	169.50	...	1/6	Carrene	350	L 58 x 26¼ x 24⅜	P	10.46	4	2	96	7.3
51-D	5.1	169.50	...	1/6	Carrene	345	L 53 x 24½ x 24¾	P	10.4	4	2	96	7.3
54-D	5.4	189.50	...	1/5	Carrene	407	L 56½ x 24½ x 25½	P	10.34	4	2	84	6
61-D	6.1	199.50	...	1/6	Carrene	410	L 57⅞ x 27⅛ x 24¾	P	13.66	5	3	128	9.8
65-D	6.53	209.50	...	1/5	Carrene	456	L 58⅜ x 29¼ x 25½	P	13.96	5	3	112	8
80-D	8.0	229.50	...	1/5	Carrene	484	L 62¼ x 31¼ x 25½	P	15.67	5	4	140	10
56-SD	5.6	189.50	...	1/6	Carrene	395	L 56½ x 25 x 27	P	10.2	4	3	128	8
65-SD	6.53	251.00	...	1/5	Carrene	480	L 58⅜ x 29¼ x 25½	P	13.96	5	3	108	8
67-SD	6.7	237.50	...	1/5	Carrene	465	L 58⅜ x 29⅞ x 27	P	14.30	6	4	160	12.2
80-SD	8.0	271.00	...	1/5	Carrene	510	L 62¼ x 31¼ x 25½	P	15.67	5	4	136	10
82-SD	8.2	275.00	...	1/5	Carrene	495	L 62¼ x 31¾ x 27	P	15.96	6	5	192	14.6

*Zone 1, plus delivery.

Stewart-Warner

Stewart-Warner Corp., Chicago, Ill.

Cabinet—Rex 1-door cabinet, steel frame, Tylac breaker strip, rubber gasket. Balsam Fibre insulation. Thickness of insulation: models 0455 and 0505—top 2½ in., sides and back 2 in., door 2⅞ in., bottom 2⅝ in.; model 0605—top 3 in., sides 2½ in., back 2¼ in., door 3 in., bottom 2⅝ in.; model 0465—top, sides, and back 2 in., door 2¾ in., bottom 2½ in.; models 0555 and 0574—top 3 in., sides 2½ in., back 2⅛ in., door 3 in., bottom 3½ in.; model 0705 and 0724—top, sides, and back 3½ in., door and bottom 3½ in. Winters & Crampton hardware. Models 0455, 0505, and 0605 hardware finish stainless steel, natural buff; all others, cast white brass, chromium finish.

Compressor—Stewart-Warner open-type reciprocating compressor. Models 0455 and 0505—1 cylinder; all others, 2 cylinder. Belt drive. Compressor speed—0455, 0505, and 0605, 450 r.p.m.; all others, 375 r.p.m. Bore, 1½ in.; stroke, 1-7/16 in. Fulton sylphon shaft seal. Compressor located below. Refrigerant charge—model 0455, 4 lbs.; model 0505 and 0605, 4½ lbs.; models 0465, 0555, 0705, 0574, and 0724, 5 lbs. Lubrication white oil. Charge, models 0455, 0505, and 0605—14 oz.; models 0465, 0555, 0705, 0574, and 0724—22 oz.

Control—Penn automatic temperature control. Manual defrosting on models 0455, 0505, and 0605; all others, wide cycle defrosting.

Condenser—Bush and McCord fan-cooled fin tube condenser.

Motor—G-E capacitor start motor. Oil yearly.

Evaporator—Mullins pressed steel shell evaporator, porcelain finish. Low side float refrigerant control. Anodically treated aluminum ice trays.

Guarantee—System and cabinet 1 year. Serviced by dealers.

Special Features—Electric lights in all but 4½-cu. ft. model; deluxe accessory kits consisting of drawer type hydrator, drawer type combination food and egg basket, plus three covered dishes.

MODEL NO.	CU. FT.	F.O.B. PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
0455	4.6	$129.50	93	1/6	SO_2	302	* 52¾ x 23¼ x 24⅛	P 27⅜ x 19 x 16¾	9.3	3	2	56	4¼
0505	5.0	149.50	93	1/6	SO_2	321	* 54¾ x 23¼ x 24⅛	P 29⅜ x 19 x 17	10.0	3½	3	84	6⅜
0605	6.0	169.50	93	1/6	SO_2	359	* 57¼ x 25¾ x 24⅝	P 32½ x 20½ x 16⅞	11.3	3½	3	84	6⅜
0465	4.6	139.50	155	1/5	SO_2	335	* 52¾ x 23¼ x 24¾	P 27⅜ x 19 x 16¾	9.3	3	2	56	4¼
0555	5.6	169.50	155	1/5	SO_2	390	* 58¼ x 25¾ x 25¼	P 30⅞ x 20½ x 16⅞	10.5	3	3	84	6⅜
0705	7.1	194.50	155	1/5	SO_2	441	* 59¼ x 30 x 27	P 31⅜ x 23¾ x 17½	13.4	3½	3	84	6⅜
0574	5.6	189.50	155	1/5	SO_2	447	P 58¼ x 25¾ x 25¼	P 30⅞ x 20½ x 16⅞	10.5	3	3	56	6⅜
0724	7.1	219.50	155	1/5	SO_2	503	P 59¼ x 30 x 27	P 31⅜ x 23¾ x 17½	13.4	3½	3	84	6⅜

*Porceloid lacquer.

Universal Cooler

Universal Cooler Corp., Detroit, Mich.

Cabinet—Truscon 1-door cabinet, steel frame, Bakelite breaker strip for all but model 435, which uses wood, rubber gasket. Thermocraft insulation. Thickness of insulation—model 435 top, sides, back, and bottom, 2 in., door, 2½ in.; model 535 top, sides, and back, 2½ in., door, 3 in., bottom, 2¾ in.; model 635 and 835 top, sides, back, and door, 3 in., bottom, 3½ in. Grand Rapids brass chromium-plated hardware.

Compressor—Universal Cooler sealed reciprocating compressor, 1 cylinder for all except model 835, which has two. Belt-driven with compressor speed 430 r.p.m. for all except model 835, which is driven at 400 r.p.m. Bore 1½ in., stroke, 1¼ in. Bellows shaft seal. Compressor below food compartment. Refrigerant charge—1¼ lbs. Lubrication—¾-pt. White Star No. 425 or Standard Oil No. 4049, for all models except model 835, which uses 1¼ pts.

Evaporator—Universal Cooler copper and brass tubular evaporator. Thermostatic control. Detroit Lubricator expansion valve. Aluminum ice trays, with one rubber tray in all except model 435.

Control—Tagliabue automatic temperature control, with wide cycle defrosting.

Motor—Wagner capacitor. Oil annually.

Condenser—Long fan-cooled radiator-type condenser.

Guarantee—Cabinet and system, 1 year. Serviced by dealers and independent service men.

Special Features—All models except 435 equipped with interior electric light. Model 635 and 835 equipped with fast-freezing dessert compartment.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
435	4.3	$117.50	96	1/6	CH_3Cl	215	* 54¼ x 23⅞ x 20¼	P 26¾ x 19½ x 16¼	8.2	3	3	54	3½
535	5.2	159.50	96	1/6	CH_3Cl	250	* 58¼ x 26¼ x 22	P 29 x 21 x 17	11.7	4	3	63	4
635	6.3	189.50	96	1/6	CH_3Cl	285	* 60 x 30 x 23	P 30 x 23¾ x 17½	13.6	4	3	84	6
835	8.1	209.50	175	1/5	CH_3Cl	335	* 62⅝ x 32¾ x 24	P 33½ x 26½ x 18½	15.6	5	4	140	10

*Alchemik with black Alchemik base except model 435 which has white Alchemik legs.

Apex

Apex Electrical Mfg. Co., Cleveland, Ohio.

Cabinet—Rex one-door cabinet, wood and steel frame, balloon-type rubber 745—top 3 in., sides, back, and bottom 2 in., door 2½ in.; all other models—top 3½ in., sides, back, and door 3 in., bottom 3⅜ in. Chrome-plated Winters & Crampton latch, and Grand Rapids Brass hinges.

Compressor—One-cylinder Apex open-type reciprocating compressor with 1⅜ in. bore and 1½ in. stroke on models 745, SSL-6, and SS-7. Compressor speed on models 745 and SSL-6—460 r.p.m.; on model SSL-7—520 r.p.m.

Two-cylinder Apex open-type reciprocating compressor with 1⅜ in. bore and 1½ in. stroke on all other models.)Compressor speed, 350 r.p.m. Balanced bellows shaft seal. Compressor below food compartment; 4 to 5¼ lbs. sulphur dioxide; 7 oz. Sun Oil Co. lubricant in one-cylinder compressors; 11 oz. in two cylinder.

Control—Penn automatic temperature control. Manual defrosting on model 745; semi-automatic on all others.

Condenser—Long fan-cooled, fin tube condenser.

Evaporator—Mullins steel shell evaporator. Low side float refrigerant control. Rubber tray furnished with all models except 745. Aluminum ice cube trays.

Motor—Apex, Delco, and G-E capacitor motors. Oil every six months.

Special Features—Electric light on S and D models; foot pedal door opener, dairy basket, and vegetable crisper on all D models.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
745	4.5	$.....	95	1/6	SO_2	...	L 52¼ x 24 x 23	P 26¼ x 19⅝ x 17	8.3	3	2	56	3½
SSL-6	6.1	.....	95	1/6	SO_2	...	L 55¾ x 33¼ x 25⅝	P 26 x 25¼ x 18	12.4	6	3	84	5¼
SSL-7	7.1	.....	110	1/5	SO_2	...	L 60 x 33¼ x 25⅝	P 30¼ x 25¼ x 18	12.4	6	4	112	7
DTL-6	6.1	.....	135	1/5	SO_2	...	L 55¾ x 33¼ x 25⅝	P 26 x 25¼ x 18	12.4	6	3	84	5¼
DTL-7	7.1	.....	135	1/5	SO_2	...	L 60 x 33¼ x 25⅝	P 30¼ x 25¼ x 18	12.4	6	4	112	7
DTL-8	8.1	.....	135	1/5	SO_2	...	L 64¼ x 33¼ x 25⅝	P 34½ x 25¼ x 18	14.2	7	4	140	8¾

Ice-O-Matic

Williams Oil-O-Matic Heating Corp. Bloomington, Ill.

Cabinet—Seeger and Williams 1-door cabinet, steel and wood frame, wood and Bakelite breaker strip, rubber gasket. Thermocell insulation, 3½ in. throughout on models S-354-1, S-355-1, and S-355-2; all others, 3 in. throughout. Chromium-plated hardware.

Compressor—Williams open-type reciprocating compressor. Models S-354-1 and S-355-1 one cylinder; others, two cylinders. Belt drive. Compressor speeds, models S-354-1 and S-355-1, 400 r.p.m.; all others, 300 r.p.m. Bore 1-5/16 in., stroke 1-5/16 in. Rotary shaft seal. Compressor below food compartment. Refrigerant charge—2½ lbs. Lubrication—1½ pts. Vacuum No. S1044.

Control—Penn automatic temperature control with semi-automatic defrosting.

Motor—Williams capacitor-start motor. Oil once a year.

Condenser—Fedders fan-cooled fin tube condenser.

Evaporator—Fedders tinned copper tube evaporator. Float valve refrigerant control. Aluminum ice trays.

Guarantee—System and cabinet 1 year. Serviced by dealers.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
S-354-1	4.2	$.....	102	1/8	CH_3Cl	285	L 53 x 24½ x 20¼	P 26 x 19 x 15½	9.7	5	3	54	3¾
S-355-1	5.6	.....	102	1/8	CH_3Cl	335	L 56½ x 26 x 21¼	P 29½ x 20½ x 16½	12.1	6	3	63	4¼
S-355-2	5.6	.....	155	1/6	CH_3Cl	345	L 56½ x 26 x 21¼	P 29½ x 20½ x 16½	12.1	6	3	63	4¼
S-356-2	6.5	.....	155	1/6	CH_3Cl	390	L 59¾ x 30¼ x 23	P 32¼ x 23½ x 15¾	13.4	5	4	84	8½
D-3566-2	6.5	.....	155	1/6	CH_3Cl	390	D 62¾ x 30¼ x 23	P 32¼ x 23½ x 15¾	13.85	5	4	84	8½
D-358-2	6.5	.....	155	1/6	CH_3Cl	415	D 62¾ x 34 x 24	P 32 x 27½ x 16¼	16.5	5	4	84	8½
P-3566-2	7.9	.....	155	1/6	CH_3Cl	410	P 62¾ x 30¼ x 23	P 32¼ x 23½ x 15¾	13.85	5	4	84	8½
P-358-2	7.9	.....	155	1/6	CH_3Cl	435	P 62¾ x 34 x 24	P 32 x 27½ x 16¼	16.5	5	4	84	8½

M & E

Merchant & Evans Co., Philadelphia, Pa.

Cabinet—Seeger 1-door cabinet, Bakelite breaker strip. Multicell insulation, 2 in. thick throughout for model L-404; 2½ in. throughout for models P-504 and D-504; 3 in. throughout for models D-604, P-604, and P-704. Chromium-plated hardware.

Compressor—Merchant & Evans open-type reciprocating 1-cylinder compressor. Belt driven with compressor speed 625 r.p.m. for all models except model L-404, which has compressor speed of 1,725 r.p.m. Model L-404, bore 1 in., stroke ¾ in.; all others, bore 1½ in., stroke 1¼ in. Diaphragm shaft seal. Compressor below food compartment. Sun Oil used for lubrication.

Control—Tagliabue manual temperature control.

Motor — Wagner repulsion-induction motor. Oil yearly.

Evaporator—McCord copper evaporator. Thermostatic control. Detroit Lubricator and Mayson expansion valves. Aluminum ice trays.

Guarantee—System and cabinet, 1 year. Serviced by dealers and independent service firms.

Condenser—Merchant & Evans fan-cooled fin tube condenser.

Special Features—Interior electric light and foot pedal.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
L-404	4.07	$128.00	70	1/6	SO_2	...	D 56⅛ x 25⅜ x 20½	P 27½ x 19½ x 15	8.95	..	..	56	..
D-504	5.0	180.00	100	1/6	SO_2	...	D 60½ x 26⅜ x 22	P 30 x 20½ x 16	12.45	..	..	84	..
P-504	5.0	202.00	100	1/6	SO_2	...	P 60½ x 26⅜ x 22	P 30 x 20½ x 16	12.45	..	..	84	..
D-604	6.17	212.00	100	1/6	SO_2	...	D 63⅜ x 30½ x 22	P 32 x 23⅝ x 15½	12.85	..	..	112	..
P-604	6.17	243.00	100	1/6	SO_2	...	P 63⅜ x 30½ x 22	P 32 x 23⅝ x 15½	12.85	..	..	112	..
P-704	7.41	283.00	100	1/6	SO_2	...	P 63⅜ x 34⅛ x 23	P 32 x 23¼ x 16⅛	15.15	..	..	140	..

O'Keefe & Merritt

O'Keefe & Merritt Co., Los Angeles, Calif.

Cabinet—One-door, O'Keefe & Merritt cabinet with wood and steel frame, Bakelite breaker strip and rubber gasket. Celotex insulation in model 354—2 in.; models 355 and 356—3 in.; all others—3½ in. National Lock chromium-plated brass hardware.

Compressor—O'Keefe & Merritt open-type reciprocating 2-cylinder compressor, belt driven at 450 r.p.m. Bore in model 735, 1⅜ in.; model 1035, 1½ in.; all others, 1¼ in. Stroke 1¼ in. Rotary Seal shaft seal. Compressor mounted under food compartment. Refrigerant charge—models 354 and 355, 2½ lbs.; models 356 and 653, 3 lbs.; model 735, 3¼ lbs.; model 1035, 4 lbs. Lubrication—12 oz. Standard Oil.

Condenser—Bush and Flexo fan-cooled, fin-tube condenser.

Control—Ranco automatic temperature control with automatic defrosting.

Evaporator—O'Keefe & Merritt steel shell evaporator. Detroit Lubricator expansion valve. Alumilited aluminum ice trays with finger release.

Motor—General Electric and Wagner capacitor. Oil every three months.

Guarantee—Cabinet and system 1 year. Serviced by manufacturer. Replacement parts sold to service companies.

Special Features—Electric light in all models. Combination drawer-type food freshener with food rearranging shelf cover of stainless steel, sliding dairy basket, built-in thermometer, and rubber ice trays on models 635, 735, and 1035.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
354	4.17	$124.50	103	1/6	SO_2	325	L 54 x 24 x 22¾	P 25 x 18 x 17	7.0	..	2	56	3½
355	5.17	149.00	103	1/6	SO_2	375	L 58½ x 25 x 22¾	P 29 x 19 x 17	9.5	..	2	56	3½
356	6.22	169.00	103	1/6	SO_2	425	L 59¼ x 28 x 22¾	P 30 x 22 x 17	11.2	..	3	84	5¼
635	6.22	$198.00	103	1/6	SO_2	425	L 59¼ x 29 x 22¾	P 30 x 22 x 17	11.2	4	3	84	5¼
735	7.42	225.00	...	1/6	SO_2	450	L 62¼ x 31 x 22¾	P 33 x 24 x 17	12.2	..	4	112	7
1035	10.45	325.00	...	1/4	SO_2	575	L 62¼ x 43 x 22¾	P 33 x 36 x 17	20.0	..	6	168	10½

Potter

Potter Refrigerator Corp., Buffalo, N. Y.

Cabinet—Rex 1-door cabinet for all except model D155, which has 2 doors. Panelyte breaker strip, rubber gasket. Balsam Wool insulation in model L45 and AL55 top and bottom, 3 in., sides, 2 in.; models L65 and L75, top, 3 in., sides, 2¾ in., bottom, 4 in.; all others, top, 3 in., sides, 2¾ in., bottom, 2 in. with 2 in. for top, 4¾ in. for sides, and 5 in. for bottom of frozen storage compartment. Grand Rapids Brass cast hardware, chromium-plated.

Compressor—Universal Cooler open-type reciprocating 1-cylinder compressor, belt-driven at 430 r.p.m. Bore 1½ in., stroke 1¼ in. Bellows shaft seal. Compressor below food compartment. Refrigerant charge, model D155—1½ lbs.; others, 1 lb. Lubrication—¾-pt. Argon oil.

Control—Cutler-Hammer temperature.

Evaporator—First evaporator, continuous coil sleeve; second evaporator, continuous fin coil. Metal used, aluminum and copper. Thermostatic control. Detroit Lubricator expansion valve. Aluminum ice trays, with one rubber tray in each model.

Motor—Wagner repulsion-induction motor. Oil every 3 months.

Condenser—Long fan-cooled fin tube condenser.

Guarantee—System and cabinet, 1 year. Serviced by dealers and independent service men.

Special Features—Frozen storage compartment with capacity of ½ bushel in model D85, 4/5 bushel in model D105, and D135, and 1¼ bushels in model D155. Porcelain shelves, interior light, five-way door latch, fruit and vegetable basket.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
L-45	...	$129.00	120	1/6	CH_3Cl	330	L 52½ x 23½ x 20½	P 25¼ x 19¼ x 16½	8.3	4	3	84	6
L-55	...	169.00	120	1/6	CH_3Cl	370	L 57½ x 23½ x 20½	P 31 x 19¼ x 16½	10.5	5	3	84	6
L-65	...	226.00	120	1/6	CH_3Cl	415	L 57¾ x 29½ x 22⅜	P 29 x 24 x 17	12.4	5	3	84	6
L-75	...	269.00	120	1/6	CH_3Cl	430	L 63¼ x 29½ x 22⅜	P 34½ x 24 x 17	14.5	6	4	112	8
D-85	...	242.00	120	1/6	CH_3Cl	420	P 57¾ x 23½ x 22⅜	P* 16¾ x 18 x 16⅛	7.2	5	2	56	4
D-105	...	299.00	120	1/6	CH_3Cl	470	P 57¾ x 29½ x 22⅜	P* 16¾ x 24 x 16⅛	10.3	5	3	84	6
D-135	...	342.00	120	1/6	CH_3Cl	510	P 63¼ x 29½ x 22⅜	P* 22¼ x 24 x 16⅛	13.0	6	3	84	6
D-155	...	426.00	166	1/4	CH_3Cl	560	P 65½ x 33½ x 22⅜	P* 22¼ x 28 x 16⅛	15.0	6	4	112	8

*Size of general storage compartment. Frozen storage compartment dimensions: model D-85—9x14x15⅛; model D-105 and D-135—9x20x15⅛; model D-155—10½x24x15⅛.

Starr Freeze

Starr Co., Richmond, Ind.

Cabinet—Starr cabinet, wood frame, walnut breaker strip, rubber gasket. One door for models T, R, and N; 2 doors on models Q and G; 4 doors on model H. Zilem fibre sealed slab insulation. Thickness of insulation—model T 2 in. throughout; model R sides, back, door, and bottom 2¼ in., top 3 in.; model N top, sides, back, and door 3 in., bottom 4 in.; model Q 3¾ in. throughout; model G 3⅛ in. throughout; model H top, sides, back, and door 3⅛ in., bottom 4 in. Winters & Crampton and Grand Rapids Brass chromium-plated hardware.

Compressor—Starr open-type reciprocating compressor. Models T and R, 1 cylinder; all others, 2 cylinders. Belt drive. Compressor speed—models T, R, and G, 300 r.p.m.; model N, 500 r.p.m.; model Q, 600 r.p.m.; model H, 400 r.p.m. Compressor bore and stroke—models N and Q, bore 1⅛ in., stroke 1¼ in.; all others, bore 1.64 in., stroke 1.625 in. Sylphon shaft seal. Compressor below food compartment. Refrigerant charge—10 oz., 15 oz., 22 oz. Lubrication—10 oz. Purol oil.

Control—Cutler-Hammer automatic temperature control with manual defrosting.

Motor—Leland capacitor. Oil yearly.

Evaporator—Starr expansion type copper evaporator. Thermostatic control. Mayson expansion valve. Aluminum ice trays.

Condenser—Starr fan-cooled condenser.

Guarantee—System and cabinet, 1 year. Serviced by dealers and independent service companies.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
T	2.85	$.....	80	1/8	SO_2 or CH_3Cl	72	* 50¾ x 20½ x 20	P 25⅜ x 15½ x 13⅝	4.4	3	2	30	3
R	4.0	.....	100	1/6	SO_2 or CH_3Cl	72	* 55¾ x 24⅝ x 22⅝	P 27½ x 19¾ x 16⅛	9.0	5	2	56	3¾
N	6.1	.....	151	1/6	SO_2 or CH_3Cl	74	* 58⅝ x 33 x 26⅝	P 29½ x 25¼ x 17¼	13.0	7	4	112	7½
Q	7.18	.....	203	1/5	SO_2 or CH_3Cl	79	* 57½ x 37½ x 24	P 30 x 31 x 19¼	11.75	7	5	140	8⅜
G	12.1	.....	263	1/4	SO_2 or CH_3Cl	147	* 67 x 49½ x 26	P 35 x 42½ x 16½	20.75	12	6	224	15
H	17.8	.....	354	1/3	SO_2 or CH_3Cl	153	* 67½ x 49½ x 25½	P 52¼ x 42¾ x 16	28.16	14	8	336	22½

*"Nu Spede" enamel.

Truscon

Truscon Steel Co., Cleveland, Ohio.

Cabinet—Truscon 1-door cabinet, steel frame, Bakelite breaker strip, rubber gasket. Grand Rapids brass hardware, chromium-plated.

Compressor—Universal Cooler open-type reciprocating compressor, 1-cylinder on all but model T835, which has 2 cylinders. 1⅛-in. bore, 1¼-in. stroke. Belt-driven with compressor speed 430 r.p.m. on all but model T-835 which is driven at 400 r.p.m. Bellows shaft seal. Compressor below food compartment. Refrigerant charge—1 lb. Lubrication—1¼ pts.

Control—Tagliabue automatic temperature control, with manual defrosting.

Motor—Wagner. Oil yearly.

Evaporator—Universal Cooler copper and brass evaporator. Thermostatic control. Detroit Lubricator expansion valve. Aluminum ice cube trays.

Condenser—Fan-cooled radiator type.

Guarantee—System and cabinet, 1 year.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR		SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
T-435	4.3	$.....	99.2	1/6	CH_3Cl	...	L 54¼ x 23⅞ x 20¼	P 26¾ x 19½ x 16¼	8.2	3	3	54	3½
T-535	5.2	.....	99.2	1/6	CH_3Cl	...	L 58¼ x 26¼ x 22	P 29 x 21 x 17	11.7	4	3	63	4
T-635	6.3	.....	99.2	1/6	CH_3Cl	...	L 60 x 30 x 23	P 30 x 23¾ x 17½	13.6	4	3	84	6
T-835	8.1	.....	180	1/5	CH_3Cl	...	L 62½ x 32⅞ x 24	P 33½ x 26½ x 18½	15.6	5	4	140	10

COMMERCIAL MACHINE SPECIFICATIONS TO APPEAR IN APRIL 3 ISSUE

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Changing Methods of Merchandising

SATURATION seems to be a bugaboo which has bothered the electric refrigeration industry's Hot Stove League no end during the last couple of years. Letters come frequently to this office asking: "What will happen to the industry when the market becomes one-third or half saturated? Sales may be comparatively easy now, but at the great rate the industry has been going, it won't be long before the best part of the market will be picked off."

One answer is that the market keeps enlarging. The number of American homes wired for electricity continues to grow, and with all the pressure now being brought to bear upon utilities for rate reductions, it is entirely possible that the central stations will push forward much more rapidly in the immediate future toward the electrification of the United States in order that they may obtain increased consumption.

Another answer is that the first million sales aren't necessarily the easiest. In fact, they are probably the hardest. And certainly the costliest.

High Saturation in New York City

A good demonstration of the difference in sales methods occasioned by increased saturation of the market for electric refrigerators may be had by studying the changed distribution picture in New York City today. For a good many years New York has been far in the lead among all sections of the country in sales of household electric refrigerators, and saturation of this market is relatively high. Hence what's happening in Manhattan, the Bronx, and Queens may be considered indicative of future trends in other metropolitan centers.

(The saturation factor in New York City is further affected by the high annual sales volume of Electrolux gas refrigerators, a mighty portion of which go into the New York territory.)

Luxurious Showrooms—Factory Control

At first electric refrigerators were sold in New York City by gentlemen in top hats and frock coats. All through the years hard-driving specialty sales crews, trained and supervised by factory officials, have been doing the selling. Strikingly appointed showrooms were a necessary part of the picture. Factory branches controlled all sales operations in that area. Factories poured hundreds of thousands of dollars into advertising and promotion in the territory. It was all terribly expensive, but it got results.

Before the beginning of the present selling season, Frigidaire discontinued its branch operations in New York City, announcing that it was leaving the field to department stores and shopping center dealers. And now Rex Cole, General Electric distributor, promoter on the grand scale, and operator of the country's most magnificent chain of electrical appliance showrooms, is abandoning his old methods of distribution.

Mr. Cole declares that he will quit the showroom business. It's not only too expensive for present-day margins, but it isn't needed any more. Public acceptance for electric refrigeration has now reached such a high point that remarkable showmanship isn't needed to get prospects to come into a store and look at a line of household refrigerators. They now come in of their own accord to look over the new models, just as they drop in to see the new motor cars on dealer floors.

Dealer Display—Office Operation

Although his program isn't entirely worked out, it seems likely that Rex Cole, Inc., will adopt some modification of the "St. Louis plan"—which has been evolved and worked so profitably by James & Co., St. Louis G-E distributor. This plan, briefly, consists in entrusting product display to strategically located dealers. Until a year or so ago, James & Co. had no central showroom at all, operating entirely from a suite of offices—which weren't even on the ground floor—of an office building. Mr. James was probably far ahead of his times, but today the industry seems to be coming around to his way of thinking. Higher market saturation may be "blamed"—with its attendant high public acceptance—for the shift in sentiment toward putting display and direct sales supervision entirely in the hands of dealers.

Department Store Price Cutting

This shift in sales methods isn't always entirely satisfactory in all of its aspects to manufacturers, even though it does mean lower sales costs. Take, for instance, the Macy case. As recounted in the March 13 issue of ELECTRIC REFRIGERATION NEWS and followed up in the current issue, the big Macy department store in New York City has been buying up Kelvinators and Frigidaires from bootleg sources, cutting the prices, causing other department stores to follow suit, and distressing the entire market for these makes of household refrigerators. Time was when Frigidaire, especially, had entire and utter control of the sales of its products. Now that regimentation of its sales organizations isn't so pronounced as it was, Frigidaire and other manufacturers sometimes find themselves in embarrassing and highly irritating situations.

"Saturation" should be no bogey-word to the electric refrigeration industry. It means changed market conditions. In turn, changed sales methods are indicated. These new methods, which are now in the process of evolution, mean new problems. But to a youthful and vigorous business like electric refrigeration, new conditions, new methods, and new problems simply make life more interesting.

WHAT OTHERS SAY

Let the President Speak

THE greatest name signed to advertising today is that of Henry Ford. When he talks about the plans of the Ford Motor Co., he speaks in the first person, direct to the millions interested in what his great institution has to offer. His messages command intense interest, and are read with the same attention which would be given to similar expressions in the news columns, where, as a matter of fact, they frequently appear.

Advertising messages from Alfred P. Sloan, Jr., and Walter Chrysler, though they appear less frequently than those of Mr. Ford, are likewise accorded a measure of interest and respect which merely corporate advertisements, unsigned personally, can seldom attain.

Other well-known companies are realizing the public interest in the big personalities who can define their policies, and who are qualified to speak in their behalf to the public which is relied on to supply the demand which will enable sales volume to be maintained. Milton Florsheim, head of the Florsheim Shoe Co., for example, has just adopted this plan, and is developing a fine quality of intimate conversational copy about the important subject of good shoes for men and women.

Business is "on the pan" in so many places at present, and advertising copy carries so many responsibilities, that a double purpose would be served by letting the head of the company, provided his name means something to the public, speak for his institution as frequently as possible regarding its policies and products.—*Advertising Age*, March 16, 1935.

LETTERS

He Doesn't Give a Damn

Frigeration Service Co.
An Independent Service Company
Efficient Frigidaire Service
2132 Sunset Blvd., Los Angeles
Phone FEderal 0548

Editor:

It is of no consequence to us whether we are included in your DIRECTORY or not. You are printing the book, not us. If you call your book a directory, it should include the names of *all* refrigeration concerns, not just your subscribers. Your present policy and more especially your last years policy of only printing the names of your subscribers makes of your book just a list of your subscribers, nothing more.

We were at one time subscribers to your magazine, but being strictly a service concern with nothing to sell but service we found little in your magazine to interest us.

We are an independent service concern. We have an established clientele of customers, most of whom own Frigidaire machines. We seem to stack up about as high as the average service outfit in Los Angeles. Put us in your book or leave us out. It will be OK with us either way.

ROY A. MCGREGOR.

Answer: You're all wrong, buddy, about listing only our subscribers. Also, you should renew your subscription to the NEWS. You will find more information of value to service men in it now.

Refrigeration History

Universal Cooler Corp.
Export Department
75 West St., New York, N. Y.

Editor:

One of our connections in Austria has asked us to secure for him a book entitled "The Patent Suit Between Absopure and Frigidaire."

Mr. Nugent of our factory at Detroit advises that you may be able to tell us where we can get a copy of this book or booklet.

We would appreciate your advices.

S. G. WHITEHEAD,
Manager Export Department.

Answer: The complete transcript of testimony in the Frigidaire-Absopure patent suit (over 1,000 typewritten pages) was printed in full in two issues of ELECTRIC REFRIGERATION NEWS, March 27 and April 10, 1929. All of the material was reprinted in a 48-page supplement (same size as the NEWS) and copies of the supplement are still available at $1.00 per copy. The suit involved the Wolf patents which claimed invention of the basic features of the electric refrigerator. These patents were declared invalid by Federal Judge Tuttle at Bay City, Mich. During the trial much interesting evidence was introduced bearing on the early development of mechanical refrigeration and it is for this reason that the document is of value to engineers, patent attorneys, and students of refrigeration.

Try a Classified Ad

Midway Electrical Service
Motors—Refrigerators—Appliances
Power Machinery
Proctor, Minn.

Editor:

I am considering entering the second hand electric refrigeration business.

Can you furnish any addresses of firms or dealers interested in turning second hand electric refrigerators?

C. B. HOLLANDSWORTH, Mgr.

Answer: Recently we have had some inquiries from concerns who have small lots of refrigerators to sell and we also receive letters occasionally from concerns who are specializing in the sale of reconditioned units. So far, however, there is no well defined group of concerns in this branch of the business and we have not yet attempted to collect a complete list.

Why not take advantage of the Classified Column of ELECTRIC REFRIGERATION NEWS to advertise yourself as a buyer for second hand electric refrigerators?

Another Classification!

Interstate Refrigerator Corp.
Wholesale Distributors of
Reconditioned Refrigerators
96 Fifth Ave., New York City

Editor:

We note in your copy of March 13 that a dealer in Oklahoma is interested in buying used refrigerators, and asked you to name a few New York dealers who are in the reconditioned refrigerator business. We noticed that you mentioned practically every concern with the exception of ours.

We are a subscriber of your ELECTRIC REFRIGERATION NEWS for the last three years and we would like to know, by return mail, as to why our name was not mentioned.

ALBERT MANN.

Answer: It is only recently that inquiries have come to our office regarding dealers who specialize in reconditioned refrigerators and no doubt our list of names is incomplete.

In classifying subscribers' names we have not previously attempted to designate this branch of the business and therefore the editors have no convenient list taken from subscription records.

We would suggest that you use the Classified Column of ELECTRIC REFRIGERATION NEWS as a very economical medium for making your services known to the trade.

Australian Recommended

Brunner Mfg. Co.
Utica, N. Y.

Editor:

I have just received a letter from Mr. G. W. Lindsay of G. W. Lindsay Pty. Ltd., 360 Collins St., Melbourne, Australia, saying that he is very much interested in securing the representation of a line of household refrigerators in Australia.

We can highly recommend Mr. Lindsay, as we have been associated with him for a good many years. I am wondering whether any of your friends are free in Australia and would like to secure the services of an able representative.

P. A. KARL,
Export Manager.

High Mortality of Lists

Refrigeration Service, Inc.
Distributors of
Refrigeration Supplies & Accessories
3109-3111 Beverly Blvd.
Los Angeles, Calif.

Editor:

I will agree with you that the mortality list of independent service companies is indeed very high and so I can appreciate your problem in obtaining a list as nearly correct as possible. In our own case it happens that we have on our mailing list approximately 1,100 name throughout the western part of the country and also several foreign countries, to whom we forward the "Liquid Line," a small house organ which we issue monthly. Probably two-thirds of these are actual customers and the others merely prospects. The list is not segregated as to independent service companies and dealers. In many cases, as you may know, dealers act as independent service companies, and so to segregate the list and provide information which would be useful to you would be quite a task.

If you have a list of Pacific coast independent service companies which you feel is possibly not up to date, I would be glad to have you forward a copy to me and I will indicate on the list, the names of those companies which are no longer operating. At the same time it might be possible for us to add some names to the list as we recall them upon going through your list looking for defunct companies.

I am afraid that this is about the only way in which we could be of any real help to you.

L. P. ROTH.

Phunny Photos of Sam

Westinghouse Electric & Mfg. Co.
200 E. Fifth St., Mansfield, Ohio

Editor:

I've just seen your "phunny photos" of me. God knows how the rest of the world stands it. My eyes, as you know, are slightly bad or I probably would grow a beard rather than shave even once a day and be compelled to look in the mirror.

In the next life I plan to be a tenor.

Just returned from a trip up and down the West Coast and that is why I haven't written sooner.

Come up and see us sometime.

V. E. VINING,
Department Store Supervisor
Household Refrigeration Sales.

Now Among the Outlaws

Electric Refrigerator Service Co.
303 Ninth St., Augusta, Ga.

Subscription Dept:

Enclosed find check for one year for REFRIGERATION NEWS. I am now among the outlaws, having left the charmed Nema group, which seems to get poorer yearly for the experienced service man, advancements are no longer on merit, and trained knowledge.

The most important thing in starting on my new venture is that I must have the NEWS, so as to keep up to the minute and abreast of the times, which you capably do.

F. H. BRAUNINGER.

Attending Air School

414 E. Ninth St.
Little Rock, Ark.

Editor:

Enclosed find money order for $3.00 for my ELECTRIC REFRIGERATION NEWS subscription renewal.

Please pardon my delay in paying this, but just overlooked it this past month—having been away attending Frigidaire's Air Conditioning School.

The NEWS surely affords me much pleasant and comprehensive information about the industry.

CHARLES K. VANCE.

Buckeye

Domestic Industries, Inc., Mansfield, Ohio.

Cabinet—Phillip's Pump and Tank Co. 1-door cabinet, wood frame, wood breaker strip, rubber gasket. Thermocraft insulation, top 2 in., side and door, 3 in., bottom, 2 ¾ in. Stamped brass chromium-plated hardware.

Compressor—Open-type reciprocating 1-cylinder Dayton compressor with 1⅝-in. bore and 1-in. stroke, belt driven at 600 r.p.m. Compressor above food compartment. Refrigerant charge, 2 lbs.

Evaporator—Mullins shell-type seal evaporator, finished in black porcelain. Capillary tube control. Anodically treated aluminum ice cube trays.

Control—Ranco manual temperature control. Wide cycle defrosting.

Motor—Emerson capacitor-start motor. Oil every six months.

Condenser—Bush or McCord fan-cooled fin tube condenser.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
600	6.0	$.....	100	1/6	SO_2	365	L 56¾ x 27½ x 22½ P	10.0	3	5	105	...

Jewett

Jewett Refrigerator Co., Buffalo, N. Y.

Cabinet—Jewett 1-door cabinet, wood frame, stainless steel breaker strip, rubber gasket. Temlok insulation 3 in. throughout on model 64; 2½-in. on all sides, and 3 in. in top on model 52. Grand Rapids Brass hardware, with dull chrome finish.

Compressor—Open-type reciprocating 1-cylinder Kellogg compressor with 1 5/16-in. bore and 1 3/16-in. stroke, belt driven at 500 r.p.m. Bellows shaft seal. Compressor located below food compartment. Refrigerant charge—24 oz. Lubrication—1 pt. Stanco.

Control—Ranco automatic temperature control with automatic defrosting.

Evaporator—Jewett shell-type copper evaporator with thermostatic control. Detroit Lubricator expansion valve. Aluminum and rubber ice cube trays.

Motor—Century capacitor motor. Oil every six months.

Condenser—Bush fan-cooled fin tube condenser.

Guarantee—System and cabinet, 1 year. Service by dealers and independent service firms.

Special features—Double depth ice cube trays. Adjustable shelves, permitting spacing every ½ in. Black porcelain baffle on front of evaporator, with chromium door.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
52	4.6	$.....	105	1/6	SO_2	380	L* 51½ x 25¼ x 21¼ P 28 x 19 x 17	9.7	3	2	56	5.17
64	5.8	$.....	105	1/6	SO_2	430	L* 55½ x 28¼ x 22¼ P 31 x 21 x 17½	13.2	4	3	112	10.34

*Top porcelain.

Liberty

Liberty Refrigeration Corp.
Providence, R. I.

Cabinet—Seeger 1-door cabinet on all models but P85 and P100 which have 2 doors. Wood frame, Bakelite breaker strip, rubber gasket. Libertex insulation 2 in. throughout on model A3; 2½ in. throughout on Model D5; and 3 in. throughout on all remaining models except A4, which is 2 in. throughout with the exception of the door, which has 2¾ in. Stamped brass, chrome-plated hardware.

Compressor—Liberty open-type reciprocating compressor, 1 cylinder on all but models P85 and P100, which have 2 cylinders with 1½-in. bore and 1 7/16-in. stroke. Belt drive. Compressor speed 490 r.p.m., except models P85 and P100, which are driven at 350 r.p.m. Balanced bellows shaft seal. Compressor below food compartment. Refrigerant charge—1 to 1½ lbs. Lubrication—1 to 1½ pts. Sunisco Oil.

Control—G-E automatic temperature control with semi-automatic defrosting.

Motor—G-E capacitor start-induction run motor. Oil every 6 months.

Evaporator—Liberty copper coil, with porcelain shield. Thermostatic control. Detroit Lubricator expansion valve. Anodically treated aluminum trays.

Condenser—Fan-cooled fin tube condenser.

Guarantee—System and cabinet, 1 year. Serviced by dealers and independent service firms.

Special Features—Foot pedal door opener on all but A models. Interior electric light. Sectional bottom shelf.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	SHIPPING WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
A-3	3.0	$.....	112	1/6	SO_2 or CH_3Cl	230	D 47½ x 22½ x 18½	....	3	2	42	2.6
A-4	4.0	.....	112	1/6	SO_2 or CH_3Cl	250	D 53⅛ x 23⅞ x 20½ P 26¾ x 19½ x 15½	8.42	3	2	56	3.5
A-6	6.08	.....	112	1/6	SO_2 or CH_3Cl	364	D 58¾ x 30½ x 22⅜ P 31 x 24⅛ x 16	12.35	5	3	84	5.25
D-5	5.1	.....	112	1/6	SO_2 or CH_3Cl	348	D 60¼ x 26⅜ x 22⅛ P 28¾ x 20⅛ x 16⅞	12.45	6	3	84	5.25
D-6	6.2	.....	112	1/6	SO_2 or CH_3Cl	373	D 63⅜ x 30½ x 22⅛ P 30⅜ x 23¼ x 15⅛	12.85	6	3	84	5.25
D-75	7.5	.....	112	1/6	SO_2 or CH_3Cl	405	D 63⅜ x 34⅛ x 23⅛ P 30⅜ x 23¼ x 15⅛	15.15	6	4	112	7.0
P-5	5.1	.....	112	1/6	SO_2 or CH_3Cl	367	P 60¼ x 26⅜ x 22⅛ P 28¾ x 20⅛ x 16⅞	12.45	6	3	84	5.25
P-6	6.2	.....	112	1/6	SO_2 or CH_3Cl	384	P 63⅜ x 30½ x 22⅛ P 30⅜ x 23¼ x 15⅛	12.85	6	3	84	5.25
P-75	7.5	.....	112	1/6	SO_2 or CH_3Cl	425	P 63⅜ x 34⅛ x 23⅛ P 30⅜ x 23¼ x 15⅛	15.15	6	4	112	7.0
P-85	8.5	.....	160	1/5	SO_2 or CH_3Cl	567	P 64⅞ x 36⅞ x 27⅛	14.85	5	5	140	8.75
P-100	10.23	.....	160	1/5	SO_2 or CH_3Cl	655	P 67¼ x 42½ x 25⅛	17.0	5	6	168	10.5

Mayflower

Trupar Mfg. Co., Detroit, Mich.

Cabinet—Truscon 1-door cabinet, wood frame, Panelyte breaker strip, rubber gasket. Zerotex insulation. Thickness of insulation—model M-435 top, sides, back, and bottom, 2 in., door, 2½ in.; model M-535, top, sides, and back, 2½ in., door, 3 in., bottom, 2¾ in.; model M-635 and M-835, top, sides, back, and door, 3 in., bottom, 3½ in. Grand Rapids Brass chromium-plated hardware.

Compressor—Mayflower open-type reciprocating 1-cylinder compressor. Bore 1½ in. on all except model M-955, which has 2-in. bore. Stroke 1½ in. Belt-driven with compressor speed 360 r.p.m. for all except model M-755, which has compressor speed of 400 r.p.m. Balanced bellows shaft seal. Compressor below food compartment. Refrigerant charge—1¼ lbs. Lubrication—⅞-pt. Suniso oil.

Control—Penn automatic temperature control with manual defrosting.

Motor—Delco or Wagner motor, with condenser start. Oil motor every 6 months.

Evaporator—Mullin steel evaporator with porcelain coated shelves. Thermostatic control. Detroit Lubricator expansion valve. Aluminum and rubber ice cube trays.

Condenser—Long fan-cooled fin tube condenser.

Guarantee—Cabinet and system, 1 year. Serviced by dealers only.

MODEL NO.	CU. FT.	F.O.B. PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
M-505	4.5	$114.00	100	1/6	CH_3Cl	...	L 54¼ x 23¾ x 20¼ P 26¾ x 19½ x 16¼	7.6	3	3	63	6
M-635	5.5	170.00	100	1/6	CH_3Cl	...	L 58¼ x 26¼ x 22 P 29 x 21 x 17	11.7	4	3	84	8
M-755	6.6	193.00	110	1/6	CH_3Cl	...	L 60 x 30 x 23 P 30 x 23¾ x 17½	14.0	4	3	84	8
M-955	8.8	228.00	150	1/5	CH_3Cl	...	L 62⅝ x 32¾ x 24 P 33½ x 26½ x 18½	16.8	4	4	112	10

National

National Refrigeration Corp., Dayton, O.

Cabinet—National 1-door cabinet on all but model N87, which has 2 doors. Wood and steel frame, Bakelite breaker strip on all but model N46, which uses Masonite. Miller rubber gasket. Balsam Wool insulation, 3 in. throughout on all but model N46, which has 2 inches. Grand Rapids brass stamped and cast chrome-plated hardware.

Compressor—Open-type reciprocating compressor, 1-cylinder on all but models N77 and N87, which have 2 cylinders with bore 1⅛-in., and stroke 1¼-in. Belt-driven with compressor speed 800 r.p.m. Refrigerant charge—model N66, 4 lbs. 6 oz.; models N77 and N 87, 5 lbs.; all others, 3 lbs., 6 oz. Sunisco No. 3 lubrication—1½ pts.

Control—Ranco or Tagliabue manual temperature control. Wide cycle defrosting.

Motor—G-E capacitor and repulsion induction motor. Oil every three months.

Evaporator—Mullins shell-type steel evaporator, finished in porcelain. Thermostatic control. Prestat expansion valve. Aluminum trays, with Flexotray optional.

Condenser—Bush fan-cooled fin tube condenser.

Special Features—Interior electric light.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
N-46	4.0	$.....	95	1/6	SO_2	280	L 50 x 23½ x 23 P 26¼ x 18 x 15¼	6.5	3	2	56	5.0
N-54	5.23	.....	95	1/6	SO_2	325	L 56 x 24½ x 24½ P 29½ x 18½ x 17⅜	10.53	6	3	84	7.5
N-66	6.43	.....	95	1/6	SO_2	355	L 56 x 28½ x 24½ P 29½ x 22½ x 17⅜	12.83	6	3	84	7.5
N-77	7.43	.....	190	1/4	SO_2	375	L 56 x 31⅞ x 24½ P 29½ x 25⅞ x 17⅜	15.08	6	4	112	10.0
N-87	8.43	.....	190	1/4	SO_2	400	L 56 x 35¼ x 24½ P 29½ x 29¼ x 17⅜	15.83	7	4	112	10.0

Parker Froskist

Parker Mfg. Co., Los Angeles, Calif.

Cabinet—Froskist 1-door cabinet except model 1035 which has two doors. Steel frame, Panelyte breaker strip, rubber gasket. Insulite insulation in model 354 2 in. throughout; models 355 and 356, 3 in.; all other, 3½ in.

Compressor—Open-type reciprocating 2-cylinder Froskist compressor with 1¼-in. bore (on all but models 735 and 1035 which have a 1⅜ and a 1½-in. bore, respectively), and 1¼-in. stroke. Compressor speed, 450 r.p.m. with belt drive. Rotary shaft seal.

Motor—G-E capacitor motor.

Condenser—Bush fan-cooled fin tube condenser.

Evaporator—Froskist steel evaporator, cadmium plated. Thermostatic control. Detroit Lubricator expansion valve. One rubber ice cube tray and ice tray release.

Control—Ranco automatic temperature control. Manual defrosting with automatic reset.

Guarantee—1 year on system. Serviced by dealers and independent service firms.

Special Features—Combination drawer-type food freshener with food rearranging shelf cover of stainless steel. Sliding dairy basket. Interior electric light. Built-in thermometer.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
354	4.17	$.....	....	1/6	SO_2	325	L 54 x 24 x 22¾ P 25 x 18 x 17	7.0	..	2	56	3.5
355	5.17	.....	....	1/6	SO_2	375	L 58½ x 25 x 22¾ P 29 x 19 x 17	9.5	..	2	56	3.5
356	6.22	.....	....	1/6	SO_2	425	L 59¼ x 28 x 22¾ P 30 x 22 x 17	11.2	..	3	84	5.25
635	6.22	.....	....	1/6	SO_2	425	L 59¼ x 29 x 22¾ P 30 x 22 x 17	11.2	..	3	84	5.25
735	7.42	.....	....	1/6	SO_2	450	L 62¼ x 31 x 22¾ P 33 x 24 x 17	12.2	..	4	112	7.0
1035	10.45	.....	....	1/4	SO_2	575	L 62¼ x 43 x 22¾ P 33 x 36 x 17	20.0	..	6	168	10.5

Sanitary Electric

Sanitary Electric Corp., Fond du Lac, Wis.

Cabinet—Sanitary 1-door cabinet for all models except Model 807, which has 2 doors. Wood frame, Sanalite breaker strip, rubber gasket. Sanatex insulation. Insulation thickness—model 870 and 700, 3 in. throughout; model 522, 2 in. throughout; model 310, 1½ in. throughout; model 420, top, sides and back, 1½ in., door and bottom, 2 in.; model 22B, top, door and bottom, 2 in., sides and back 1½ in. Sanitary chrome finished hardware.

Compressor—Sanitary open-type reciprocating compressor, 1 cylinder on all but model 870, which has 3 cylinders with 1½-in. bore, 1¼-in. stroke. Belt-driven with compressor speed 430 r.p.m. on all but model 870, which is driven at 400 r.p.m. Sylphon shaft seal. Refrigerant charge—1 to 1½ lbs. Lubrication—1 pt. Argon oil.

Evaporator—Porcelain and steel evaporators on deluxe models. Thermostatic control. Aluminum trays, with ice tray release.

Control—Tagliabue manual temperature control, with manual defrosting.

Motor—Various makes capacitor motor. Oil yearly.

Guarantee—System and cabinet, 1 year. Serviced by dealers and independent service firms.

Condenser—Fan-cooled fin and tube.

Special Features—Interior electric light, vegetable basket, swinging shelves, and rubber ice cube trays on deluxe models.

MODEL NO.	CU. FT.	F.O.B. PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	SHIPPING WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
22B	2.11	$ 72.50	96	1/6	CH_3Cl	200	L 35 x 27 x 17 P 12½ x 23⅜ x 13¼	4.13	2	2	42	3
310	3.0	85.00	96	1/6	CH_3Cl	210	L 47½ x 22½ x 18½ P 21 x 19 x 13½	6.29	3	2	42	3
420	4.0	100.00	96	1/6	CH_3Cl	270	L 48⅜ x 22⅞ x 20 P 25½ x 19½ x 14¼	7.0	3	2	42	3
522	5.0	125.00	96	1/6	CH_3Cl	350	L 54 x 25¼ x 22½ P 29⅞ x 20¾ x 14⅝	10.85	5	3	63	4½
700	6.5	154.55	96	1/6	CH_3Cl	395	L 56¾ x 29¼ x 25½ P 30¾ x 22¾ x 17½	14.4	5	3	84	6
870	8.0	210.00	180	1/5	CH_3Cl	450	L 59 x 35 x 24 P 33 x 28½ x 16	18.3	7	4	112	8

Zerozone

Zerozone Refrigeration Co., Detroit, Mich.

Cabinet—Truscon 1-door cabinet, wood frame, Panelyte breaker strip, rubber gasket. Zerotex insulation. Thickness of insulation—model Z-435 top, sides, back, and bottom, 2 in., door, 2½ in.; model Z-535, top, sides, and back, 2½ in., door, 3 in., bottom, 2¾ in.; model Z-635 and Z-835, top, sides, back, and door, 3 in., bottom, 3½ in. Grand Rapids Brass chromium-plated hardware.

Compressor—Zerozone open-type reciprocating 1-cylinder compressor. Bore 1½ in. on all except model Z-955, which has 2-in. bore. Stroke 1½ in. Belt-driven with compressor speed 360 r.p.m. for all except model Z-755, which has compressor speed of 400 r.p.m. Balanced bellows shaft seal. Compressor below food compartment. Refrigerant charge—1¼ lbs. Lubrication—⅞-pt. Suniso oil.

Control—Penn automatic temperature control with manual defrosting.

Motor—Delco or Wagner motor, with condenser start. Oil motor every 6 months.

Evaporator—Mullin steel evaporator with porcelain coated shelves. Thermostatic control. Detroit Lubricator expansion valve. Aluminum and rubber ice cube trays.

Condenser—Long fan-cooled fin tube.

Guarantee—Cabinet and system, 1 year. Serviced by dealers only.

MODEL NO.	CU. FT.	F.O.B. PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
Z-505	4.5	$114.00	100	1/6	CH_3Cl	...	L 54¼ x 23¾ x 20¼ P 26¾ x 19½ x 16¼	7.6	3	3	63	6
Z-635	5.5	170.00	100	1/6	CH_3Cl	...	L 58¼ x 26¼ x 22 P 29 x 21 x 17	11.7	4	3	84	8
Z-755	6.6	193.00	110	1/6	CH_3Cl	...	L 60 x 30 x 23 P 30 x 23¾ x 17½	14.0	4	3	84	8
Z-955	8.8	228.00	150	1/5	CH_3Cl	...	L 62⅝ x 32¾ x 24 P 33½ x 26½ x 18½	16.8	4	4	112	10

Salesmen Put on 'Partner' Basis Under New Diebold Pay Plan

CANTON, Ohio — Requirements of any salesman's compensation plan should "be fair to both parties, provide worth-while remuneration for the producer, make the man realize that he is in effect a partner in the business, insure a check-up for the removing of dead wood, offer added incentive for quota performance, and reward the sales executives."

A. W. Neally, director of marketing, Diebold Safe & Lock Co., summarizes his views as above in an article, "Developing a Successful Plan for Compensating Salesmen," published in the *Executives Service Bulletin*.

"In our business," writes Mr. Neally, "we consider it the function of a salesman to make sales and to make them at a profit to himself and the company. On this basis, it is evident that an effective and efficient salesman's compensation plan should provide terms of employment that are just and fair to both parties.

If a salesman is a real producer, believes Mr. Neally, he should have the opportunity to gain adequate financial return on the time and energy he is expending—and the company should not be asked to support continuously a man who is not a profitable investment.

How Plans Were Tested

"To determine the compensation plan that would be preferable for our particular type of business," Mr. Neally declares, "we have tested several different working agreements.

"In each case we employed a cross-test. We operated the same plan not only against men who work out of branch offices and are directly under the daily supervision of branch managers, but also against men out of division offices who operate in territories of larger area and are subject to less frequent supervisory contact.

"This cross-test was carried even further. It was used in all divisions in order to determine what effect would come from territories of varying geographical characteristics."

On three of the four plans tested, Mr. Neally said, the company paid all normal travel expense—1) straight commission, 2) straight salary, 3) advance against commission, and 4) straight commission, with extra per centage allowance for travel, salesman paying all travel expense.

On either the straight salary or advance against commission plan, he explained, the final standard against which any salesman is judged is the amount of sales he produces. His percentage or ratio of compensation to total sales must be satisfactory or it is not profitable for the company to retain him.

"It is our conclusion," Mr. Neally pointed out, "as a result of the tests, that any fair compensation plan will work successfully if you have good salesmen. Men make the plan—the plan alone can't make the men. The plan is merely an avenue which provides a clear and definite means for the man to express his worth and ability.

"We have had outstanding successes under all four plans, both in branch and division territories. The man who is a real salesman, who likes our line and who works hard, is successful no matter what plan he works under—and the reverse is true for the mediocre man."

At present, men in the Diebold company are given either a weekly or semi-monthly advance against commission. The commission rate varies according to whether the man operates in the metropolitan areas wherein a branch office is located, or in an "outside," larger area territory under division office supervision.

'Plus' for Expenses

In either case, according to Mr. Neally, the commission rate carries a plus or extra percentage to cover travel expenses. From this "extra" the man is required to defray his travel costs.

"Some men naturally travel less expensively than others," he said. "In our plan this matter is pretty much up to the man himself. If he can travel for less than the amount returned from his extra percentage, then his net earnings increase.

"As a result, the men realize that they are, in effect, partners in the business. In their territories they are practically in business for themselves. Budgets and the relationship of gross sales to expense take on new significance."

This does not mean, Mr. Neally adds, that the salesmen are left "on their own." Branch and division offices aim to help the field men in every possible way.

The Reserve Fund

"Commission accounts," he continued, "are payable semi-monthly, at which time itemized statements are sent to all men. If the net amount due the man is in excess of a certain stipulated amount (mutually agreed upon at time working agreement is signed and varying according to size of advance) then one-half the amount of the excess is retained by the company as a 'reserve' fund."

The object of such a reserve, explains Mr. Neally, is to enable the salesman gradually to build up a fund equal to twice the amount of his monthly advance. His reserve will always give him at least two months' protection. As his reserve fund increases, he has the option of increasing the amount of his advance or withdrawing in lump sum all money in excess of his reserve fund.

"All salesmen's accounts are carefully checked on the first of the month, in conference with our division managers," he continued. "Decision is made as to whether revisions (downward or upward) should be made.

"In our business we find that it takes about three months for a new man to reach a point at which he can do a constructive selling job. As a result, we consider his advance for that period as more or less a standard item and are lenient in any downward adjustments.

"As additional incentive to our force we continually operate sales contests and campaigns. In most instances, merchandise prizes are used, as we have found them more effective than cash prizes.

"It is our experience, that less expensive prizes and more of them is the best procedure. The greater the percentage of men who win, or have an opportunity to win prizes, the greater the interest and enthusiasm."

Percentage of Quota

All awards are on a percentage of quota basis, not on straight dollar sales, he explained. In the opinion of Mr. Neally, a new man who achieves a small quota is relatively doing just as successful a job of selling as the more experienced salesman who attains a larger quota.

"Our quota club is definitely tied in to our compensation plan. The total commission earned is directly dependent upon volume of sales—the more a man sells the more he earns—and naturally, the greater his sales the higher his attainment in percentage of quota with its attending reward of prizes."

The sales department of the Diebold Safe & Lock Co. operates on a definite and rigid budget system based on quota, says Mr. Neally. The system is broken down to apply against divisional offices and the branch offices under the divisions.

"Branch and division managers are on a profit-sharing basis," he concluded. "As their branches or divisions make money they receive a share of profits earned, the percentage varying on a sliding scale upwards in accordance with quota performance."

25% Dividend Declared On Majestic Bond

CHICAGO—A first dividend of 25 per cent was paid last week to holders of Grigsby-Grunow Co. first mortgage bonds, as authorized by the court handling liquidation of the affairs of the organization, which went into bankruptcy last year.

Bondholders were given a check for 22 per cent of the face value of their bonds, the bondholders committee retaining 3 per cent to meet its own financial requirements pending further dividends. Persons who had contributed toward expenses of the committee were reimbursed in full.

Members of the bondholders committee are James O. Case, Allegheny Steel Co., chairman; J. L. Cardwell, Cardwell-Westinghouse Co.; P. H. Callahan, Louisville Varnish Co.; W. M. Cornelius, Parker Rust-Proof Co., and E. P. Essley, E. L. Essley Machinery Co.

Crosley Opens National Magazine Campaign This Month

CINCINNATI — Six words, "This Much More in a Shelvador," form the slogan around which Crosley Radio Corp. will build its 1935 advertising campaign on the Shelvador electric refrigerator, according to Advertising Manager Glenn H. Corbett.

Supporting the Shelvador theme will be copy telling the story of Crosley workmanship, materials, economy, features, and pride of ownership.

First advertisement on the 1935 line, a two-page, four-color spread, appeared in the March 11 issue of *Time* magazine. Full color pages in *Saturday Evening Post, Good Housekeeping, McCalls,* and *American Weekly* will follow.

Smaller space will be used in some 31 additional magazines, giving a total circulation of 50 million copies a month, and delivering approximately 250 million sales messages.

An extensive newspaper advertising campaign is planned, in cooperation with the Crosley dealer organization throughout the United States, with Crosley, the distributors, and the dealers splitting the costs between them. Between $1,500,000 and $2,000,000 will be spent in this way.

Radio advertising on the part of the corporation and the distributors will also form a part of the advertising program.

Back of all the advertising will be a complete series of sales promotion material, including catalogs, folders, broadsides, recipe books, and window and store displays. Local newspaper advertisements will follow up the national magazine campaign, with window and store displays and direct mail carrying through to the sale, with both salesmen and prospect.

The *Time* advertisement carried letters from suppliers of materials and machinery to bear out Crosley's claim of quality materials and precision workmanship.

The selling season for this year opened six weeks earlier than in 1934, Mr. Corbett said.

Gill Explains Legal Problems Regarding Refrigerator Sales

KANSAS CITY—Are electric refrigerators realty or personalty? This and other legal questions which have arisen to perplex refrigeration dealers and real estate men since the advent of electric refrigeration are discussed by McCune Gill in a recent issue of the *Kansas City Realtor*.

Considering the latest decisions on these new phases of the laws, Mr. Gill observes that multiple-type electric refrigerators are held usually to be realty, while some states still consider them personal property. The same is true of individual units.

Chattel mortgages and conditional sales contracts must be recorded in the real estate records in some states if they are to be binding on subsequent mortgagees and buyers, while other states hold that recording in the chattel records is sufficient.

If the dealer installed the refrigeration equipment before the date and record of a real estate mortgage or conveyance, and the chattel mortgage or conditional sales contract was properly recorded, his lein on the property is superior.

If, however, the dealer's conditional sales contract was not properly recorded, the real estate mortgage or conveyance is superior.

In the event that the refrigeration equipment was installed after there was a real estate mortgage on the property, the dealer's claim is superior, even if the chattel mortgage or conditional sales contract was not recorded.

If the refrigerator has been paid for and is held by the courts to be real estate, they pass to the buyer at the foreclosure of a real estate mortgage, whether installed before or after its date. If held to be personal property, they do not pass to the buyer unless they are specifically included.

If the refrigerator is partially paid for, the person buying the real estate foreclosure can complete the payments, and thereby defeat any claim of the former owner or his creditors.

CELOTEX

GIVES ANY CABINET

A SELLING ADVANTAGE

SPECIFY THIS PROVEN PRODUCT—IT MEETS ALL INSULATION REQUIREMENTS

FROM THE USER'S STANDPOINT

Tens of thousands of refrigerator cabinets built and insulated with Celotex and in use for five years or longer are still maintaining efficient temperatures at low operating cost.

Celotex is a pioneer in the refrigeration field—a proven product—highly favored for years as a superior insulation for domestic refrigerators, ice cream cabinets and water or bottle coolers.

Because Celotex maintains maximum effectiveness over a period of years, is Dry-Rot and Termite Proofed by the exclusive Ferox Process (patented), and offers the user many other advantages—such as sound-deadening qualities for motor compartments—it is a genuine *selling asset.*

FROM THE MAKER'S STANDPOINT

Celotex has inherent strength combined with lightness. It is an insulating material adaptable to every space, every form and type of cabinet.

Celotex is ready fabricated for you at the Celotex mills to your specifications, with close dimension tolerances always maintained. It is a workable material, permitting easy machining.

Celotex reduces heat-leaking cracks or joints to a minimum.

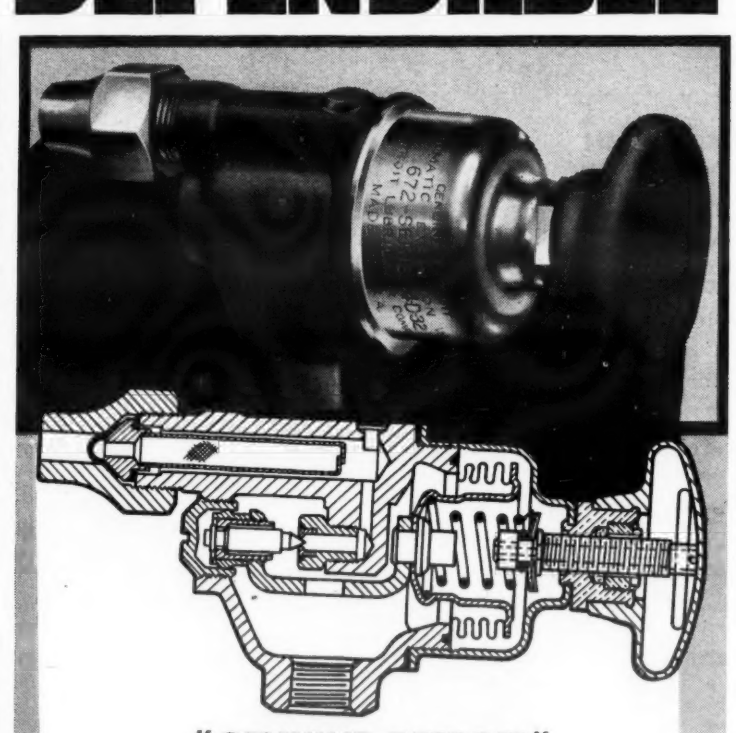
Celotex is Sterilized—Odorless—Waterproofed—Sanitary

We invite consultation with our refrigeration specialists.

THE CELOTEX COMPANY

919 No. Michigan Avenue Chicago, Illinois

• DEPENDABLE • DURABLE • SIMPLE •



"GENUINE DETROIT"

AUTOMATIC EXPANSION VALVE

No. 672

Standard equipment on the majority of domestic installations of the direct expansion type.

CAPACITY: Orifice made in two sizes—0.078" and 0.156". It thus satisfies requirements for all installations from the smallest domestic machine to those commercial units having capacities of 4 tons Methyl Chloride or 2 tons of either Sulphur Dioxide or Freon.

CONTROL: Operates over a range of from 25" vacuum to 15 pounds pressure. This unit can also be furnished with a special adjusting spring for installations requiring high suction pressures such as water coolers and air conditioning units.

ADJUSTMENT: Adjustment is made without removing breather cap.

DURABLE: The use of only the highest grade materials, time-tested and proven, assures the utmost durability in this unit.

DEPENDABLE: Ten years of satisfactory service to the Refrigeration industry.

SIMPLE: Only one moving part—the bellows and spring assembly.

DETROIT LUBRICATOR COMPANY

DETROIT, MICHIGAN, U. S. A.

DIVISION OF AMERICAN RADIATOR AND STANDARD SANITARY CORPORATION

Coldspot

Sears, Roebuck & Co., Chicago, Ill.

Cabinet—Models 104-T and 216-Y, Seeger cabinet; models 326 and 328, Norge cabinet. All models 1 door. Wood frame, Bakelite breaker strip, rubber gasket. Dry-Zero insulation 2 in. throughout for model 104-T, 3 in. thick throughout for all other models. National Lock Co. die-stamped chromium-plated brass hardware.

Compressor—Sunbeam open-type 4-blade rotary compressor, direct driven at 1,725 r.p.m. Bellows shaft seal. Compressor above food compartment. Refrigerant charge—model 104-T, 1½ lbs.; models 216-Y and 326-Y, 1¾ lbs.; model 328-Z, 2 lbs. Lubrication—1 pt. White Mineral oil.

Control—G-E manual control, semi-automatic defrosting.

Motor—Delco, G-E, and Emerson motors, capacitor start. Oil every six months.

Evaporator—Shell and tube evaporator, brass sheet, copper tube. Thermostatic control. Detroit Lubricator expansion valve. Anodically treated aluminum ice cube trays.

Condenser—Bush fan-cooled fin tube condenser.

MODEL NO.	CU. FT.	F.O.B. PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET	DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
104-T	4.2	$.....	120	1/6	SO_2	119	D 51¼ x 23⅞ x 23½	P 27¼ x 19½ x 15	9.3	3	2	64	5
216-Y	6.2	.....	150	1/5	SO_2	217	D 58¼ x 30 x 26	P 32 x 23⅝ x 15⅝	13.1	5	5	105	7½
326-Y	6.2	.....	150	1/5	SO_2	255	P 58¼ x 30 x 26	P 32 x 23⅝ x 15⅝	13.1	5	5	105	7½
328-Z	8.1	.....	180	1/4	SO_2	280	P 62¾ x 33⅝ x 26¼	P 35⅞ x 27¼ x 15⅝	17.83	6	5	138	10½

Dayton

Heinz & Munschauer, Buffalo, N. Y.

Cabinet—Heinz & Munschauer 1-door cabinet for all models except 8-B-4 which has a 2-door cabinet. Bakelite breaker strip, Miller rubber gasket. Balsam Wool insulation 2 in. throughout for model 434, 3 in. thick throughout on all other models. Grand Rapids chromium-plated hardware.

Compressor—Open-type 1-cylinder reciprocating compressor, belt driven at 800 r.p.m. Bore, 1⅛ in.; stroke, 1¼ in. Compressor below food compartment. Refrigerant charge—model 6-C-3, 4 lbs. 6 oz.; model 7-C-4 and 8-C-4, 5 lbs.; all others, 3 lbs. 6 oz. Lubrication, 1⅓ pts. Suniso No. 3.

Control—Ranco manual temperature control, with wide cycle defrosting.

Motor—Leland capacitor and repulsion-induction motor. Oil every 3 months.

Evaporator—Mullins shell-type, steel finished in porcelain. Low side float control. Aluminum trays, Flexotray optional.

Condenser—McCord fan-cooled fin tube.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	SHIPPING WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET	DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
434	4.0	$.....	85	1/6	SO_2	280	L 50 x 23½ x 23	P 26¼ x 18 x 15¼	6.5	3	2	56	5
5-C-2	5.02	.....	85	1/6	SO_2	330	L 56 x 24½ x 24½	P 29½ x 18½ x 17⅜	10.53	6	2	56	5
6-C-3	6.03	.....	85	1/6	SO_2	365	L 56 x 28½ x 24½	P 29½ x 22½ x 17⅜	12.83	6	3	84	7½
7-C-4	7.04	.....	85	1/6	SO_2	385	L 56 x 31⅞ x 24½	P 29½ x 25⅞ x 17⅜	15.08	6	4	112	10
8-C-4	8.04	.....	85	1/6	SO_2	410	L 56 x 35¼ x 24½	P 29½ x 29¼ x 17⅜	15.83	7	4	112	10

Gilfillan

Gilfillan Bros., Inc., Los Angeles, Calif.

Cabinet—Seeger 1-door cabinet, wood frame, Textolite breaker strip, Goodyear rubber gasket. Thermocraft insulation model 5D 2 in. throughout, model 6D, 2½ in. throughout, model 7D, 3 in. throughout, model 50, 2 in. throughout, model 70, 3 in. for all surfaces except top which has 2¼ in. Chromium-plated Winters and Crampton hardware.

Compressor—Gilfillan 1-cylinder open-type reciprocating compressor belt-driven with compressor speed 625 r.p.m. Bore 1¼ in., stroke ⅞ in. Cooke rotary seal. Compressor below food compartment. Refrigerant charge—2 lbs. Lubrication—12 oz. Sinclair oil.

Motor—G-E capacitor motor. Oil yearly.

Evaporator—Gilfillan continuous figure 8 copper tubing. Thermostatic control. Mayson expansion valve. Aluminum and stainless steel ice trays, some metal-flex.

Control—G-E automatic temperature control. Manual defrosting with automatic reset.

Condenser—Bush fan-cooled radiator-type condenser.

Guarantee—System and cabinet, 1 year. Serviced by dealers only.

Special features—Electric light, foot pedal door opener, auto belt tightener.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	SHIPPING WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET	DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
5-D	4.20	$132.50	125	1/6	SO_2	340	D 54¾ x 24½ x 21½	P 27½ x 20½ x 15	9.61	3	2	56	5
6-D	5.33	159.50	125	1/6	SO_2	360	D 58⅛ x 26½ x 23	P 30 x 22½ x 16	13.60	5	3	84	7½
7-D	6.30	189.50	125	1/6	SO_2	380	D 60¾ x 30½ x 23	P 32 x 24 x 16	14.45	4	4	112	10
50	4.00	104.50	125	1/6	SO_2	330	D 52¾ x 23⅞ x 21½	P 26¾ x 19½ x 15½	9.08	3	2	56	5
70	6.15	154.50	125	1/6	SO_2	370	D 58¾ x 30½ x 24	P 31⅞ x 24 x 16	13.50	5	3	84	7½

Hostess

Hostess Corp., Ltd., Toronto, Ont., Can.

Cabinet—Hostess 1-door cabinet, wood frame, Bakelite breaker strip, rubber gasket. Hinde & Dauche insulation in models 405 and 505—top and sides 2¾ in., back 2⅜ in., door 2½ in., bottom 3½ in.; model 605—top 3⅜ in., sides and back 3 in., door 2⅞ in., bottom 3½ in.; model 705—top and back 3⅛ in., sides 3⅝ in., door 3¼ in., bottom 4 in. Winters and Crampton chrome-plated hardware.

Compressor—Hermetically sealed rotary compressor, direct driven at 1760 r.p.m. Compressor below food compartment. Refrigerant charge—3 lbs. Lubrication—⅓ gal.

Condenser—Hostess natural draft fin tube condenser.

Evaporator—Hostess copper and brass evaporator, soldered with electro-tin finish. Low pressure float control. Hostess expansion valves. Aluminum trays. Ice tray release.

Guarantee—System, 1 and 3 years; cabinet 1 year. Service by dealers only.

Control—Cutler-Hammer automatic temperature control, with automatic defrosting.

Motor—G-E capacitor motor.

Special Features—Servador (on inside of door).

MODEL NO.	CU. FT.	F.O.B. PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET	DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
405	4.9	$186.00	100	1/6	SO_2	350	L 50¾ x 25¾ x 25⅝	P 26⅛ x 19¾ x 18⅛	10.0	4	2	63	4¼
505	4.5	196.00	100	1/6	SO_2	380	L 50¾ x 25¾ x 25⅝	P 26⅛ x 19¾ x 18⅛	9.2	4	2	63	4¼
605	5.7	236.00	100	1/6	SO_2	405	L 54 x 28 x 24½	P 30½ x 21⅝ x 18¼	10.8	4	2	63	4¼
705	6.7	265.00	100	1/6	SO_2	440	L 57½ x 29⅞ x 25¼	P 31¾ x 23 x 18¾	11.9	4	3	84	5½

Icemaster

Icemaster Co., Haverhill, Mass.

Cabinet—Seeger 1-door cabinet. Insulation thickness—model P5, 2½ in. throughout; all others 3 in. throughout. Chrome-finished hardware.

Compressor—Open type reciprocating 1-cylinder, belt driven at 450 r.p.m. with 1⅝-in. bore, 1⅜-in. stroke. Bellows shaft seal. Compressor below food compartment. Refrigerant charge—1½ lbs. Lubrication—1½ pts.

Control—Ranco automatic temperature control with manual defrosting.

Motor—Wagner and Century repulsion-induction motor. Oil every 6 months.

Condenser—Bush fan-cooled fin tube condenser.

Evaporator—Fedders coil-on-sleeve copper evaporator. Thermostatic control. Detroit Lubricator expansion valves. Aluminum trays, with 1 rubber tray.

Guarantee—System and cabinet, 1 year. Serviced by dealers and independent service men.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET	DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
P-5	5.0	$200.00	125	1/6	CH_3Cl	290	P or D 60¼ x 26½ x 22	P	12.5	6	2	72	6
P-6	6.0	225.00	125	1/6	CH_3Cl	325	P or D 63½ x 30½ x 22	P	13.0	6	3	96	8
P-7	7.5	250.00	125	1/6	CH_3Cl	350	P or D 63½ x 34 x 23	P	15.0	6	3	96	8

Lectrik-Ice

Uniflow Mfg. Co., Erie, Pa.

Cabinet—Uniflow 1-door cabinet on all but model DM-8 which has two doors. Wood frame, Bakelite and wood breaker strips, rubber gasket, Balsam wool insulation on "DM" models, Temlok on "M" models. Thickness of insulation—model M-45, 2 in. in top, door, and bottom, 1½ in. in sides and back; model M-60, 2½ in. in top, bottom, and door, 2 in. in sides and back; all other models, 3 in. throughout. Winters & Crampton chromium-plated hardware.

Compressor—Open-type reciprocating 1-cylinder Uniflow compressor with 1⅝-in. bore for all models, and 1-in. stroke for models M-45, M-60, and DM-5, with 1¾-in. stroke for all models. Compressor speed 550 r.p.m. for models M-45, M-60, and DM-5; all others, 440 r.p.m. Belt drive. Bellows shaft seal. Compressor below food compartment. Refrigerant charge—1½ lbs. in models M-45, M-60, and DM-5; 1¾ lbs. in all other models. Lubrication—12 oz. Sonneborn white oil.

Control—Ranco automatic temperature control. Manual defrosting.

Motor—Delco capacitor or repulsion-induction motors. Oil three times a year.

Condenser—Fedders fan-cooled fin tube condenser.

Evaporator—Uniflow copper-tinned tubular-finned evaporator. Thermostatic control. Detroit Lubricator expansion valve. Aluminum ice cube trays with handles.

Guarantee—System and cabinet 1 year. Serviced by dealers and independent service firms.

Special Features—Vegedore, ten-point temperature control with vacation setting.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET	DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
M-45	4.0	$114.00	75	1/6	CH_3Cl	...	L 53¼ x 23 x 23½	P 26¼ x 19¼ x 15¼	8.0	3	2	56	4
M-60	5.25	135.00	75	1/6	CH_3Cl	...	L 56 x 26½ x 24	P 27¾ x 21 x 17	12.0	4	3	84	6
DM-5	5.0	175.00	75	1/6	CH_3Cl	327	D 56 x 24½ x 24½	P 29½ x 18½ x 17⅜	10.5	4	2	56	4
DM-6	6.0	190.00	150	1/4	CH_3Cl	341	D 56 x 28½ x 24½	P 29½ x 22½ x 17⅜	12.8	5	3	84	6
DM-7	7.0	225.00	150	1/4	CH_3Cl	375	D 56 x 31⅞ x 24½	P 29½ x 25⅞ x 17⅜	15.0	6	3	112	8
DM-8	8.0	275.00	150	1/4	CH_3Cl	390	D 56 x 35½ x 24½	P 29½ x 29¼ x 17⅜	15.8	7	3	112	8

Universal

Landers, Frary & Clark
New Britain, Conn.

Cabinet—Seeger 1-door cabinet, steel and wood frame, Bakelite breaker strip, rubber gasket. Multicell insulation in doors on all models, 2¼ in.; in top, sides and bottom—model 445, 2¼ in.; model 456, 2¾ in.; all others, 3¼ in. Chromium-plated hardware.

Compressor—Open-type rotary Landers Frary and Clark compressor. Compressor speed—models 445, 456, 467, and 867, 650 r.p.m.; all others, 850 r.p.m. Belt drive. Bellows shaft seal. Compressor below food compartment. Refrigerant charge—3¾ to 4¾ lbs. Lubrication—1 lb. Landers Frary and Clark special.

Control—Ranco or Cutler-Hammer automatic temperature control. Semi-automatic defrosting.

Evaporator—Mullins evaporator, porcelain finished. Flooded system, low side float. Imperial Brass expansion valve. Anodically treated aluminum ice cube trays.

Motor—Delco. Oil every six months.

Condenser—Bush fan-cooled fin tube condenser.

Guarantee—System and cabinet 1 year. Serviced by dealers and independent service firms.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET	DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
445	4.1	$124.50	120	1/6	SO_2	269	D 53½ x 25½ x 19¾	P 27½ x 19½ x 15	9.1	5	2	56	4
456	5.0	159.50	120	1/6	SO_2	298	D 56½ x 26½ x 21	P 29⅞ x 20½ x 16	10.8	5	3	84	6
467	6.0	189.50	120	1/6	SO_2	335	D 59¼ x 30½ x 21½	P 31½ x 23⅝ x 15½	11.7	5	3	84	6
478	7.0	219.50	150	1/4	SO_2	370	D 64⅛ x 30½ x 21½	P 36½ x 23⅝ x 15½	14.5	6	4	112	8
489	8.1	259.50	150	1/4	SO_2	405	D 59½ x 39 x 21½	P 31½ x 31⅞ x 15½	15.7	6	4	112	8
867	6.0	219.50	120	1/6	SO_2	360	P 59¼ x 30½ x 21½	P 31½ x 23⅝ x 15½	11.7	5	3	84	6
878	7.0	259.50	150	1/4	SO_2	385	P 64⅛ x 30½ x 21½	P 36½ x 23⅝ x 15½	14.5	6	4	112	8
889	8.1	309.50	150	1/4	SO_2	424	P 59½ x 39 x 21½	P 31½ x 31⅞ x 15½	15.7	6	4	112	8

Ward

Montgomery Ward & Co., Chicago, Ill.

Cabinet—Leonard and Seeger 1-door cabinets, wood frame, Panelyte breaker strip, rubber gasket. Hermetex insulation, model L7500 and L6500, 2½ in. for top, sides, back, and bottom, 2 in. for door; model L4250, 2 in. throughout; model S550 2½ in. throughout, model S400 top, sides, back, and bottom, 2 in., door, 2½ in. Die-cast chrome-plated hardware.

Compressor—Universal Cooler open-type reciprocating compressor. Models L7500 and L6500, 2 cylinders; all others 1 cylinder. Belt-driven with compressor speed 387 r.p.m. Bore 1½ in., stroke 1¼ in. Bellows shaft seal. Compressor below food compartment. Refrigerant charge—1¼ lbs. maximum. Lubrication—1⅛ pts. Methol oil.

Evaporator—Universal Cooler wrapped coil copper evaporator. Thermostatic control. Detroit Lubricator expansion valve. Aluminum and rubber ice cube trays. Ice cube tray release.

Control—Tagliabue automatic temperature control with manual defrosting.

Motor—Delco capacitor-start motor. Oil every 3 years.

Condenser—Long fan-cooled square fin condenser.

Guarantee—System and cabinet, 1 year. Serviced by Montgomery Ward only.

Special Features—Model L7500 and L6500 rearranging tray and food drawer. All Deluxe models—electric light and shelf-X.

MODEL NO.	CU. FT.	INSTALLED PRICE	I.M.E. LBS.	MOTOR HP.	REFRIG-ERANT	NET WEIGHT	FINISH: D—DULUX, P—PORCELAIN, L—LACQUER EXTERIOR—CABINET	DIMENSIONS—INTERIOR	SHELVES SQ. FT.	NO. OF SHELVES	ICE TRAYS	NO. OF CUBES	WEIGHT IN LBS.
S-400	4.1	$ 89.95	94	1/6	CH_3Cl	220	D 50¼ x 23⅞ x 20½	P 26¾ x 18⅞ x 15½	7.5	3	3	54	4
S-550	5.65	107.95	94	1/6	CH_3Cl	261	D 53¼ x 27⅜ x 23½	P 28⅝ x 20⅞ x 17⅛	11.0	4	3	63	5
L-4250	4.14	99.95	94	1/6	CH_3Cl	269	L 50⅜ x 24½ x 21½	P 24⅛ x 19¾ x 16¾	8.72	3	3	63	4
L-6500	6.35	144.95	175	1/5	CH_3Cl	360	L 56⅞ x 28¼ x 22¾	P 29½ x 22⅛ x 18⅜	13.65	4	3	84	6½
L-7500	7.44	159.95	175	1/5	CH_3Cl	399	L 57⅛ x 31½ x 22¾	P 30¼ x 25¼ x 18⅜	16.25	6	4	112	9

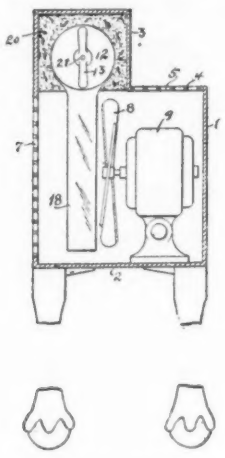
COMING: "HOW TO SELL ELECTRIC REFRIGERATION"—APRIL 10 ISSUE

PATENTS

Issued March 5, 1935

1,993,013. AIR COOLING AND CONDITIONING MEANS. George M. Marr, New York, and Arthur P. Marr, Brooklyn, N. Y., assignors to Air Conditioners, Inc., New York, N. Y., a corporation of Delaware. Application March 21, 1932. Serial No. 600,112. 2 Claims. (Cl. 62—91.5.)

1. An air cooler comprising a cabinet having inlet and outlet ports, a fan arranged in said cabinet, a container for a

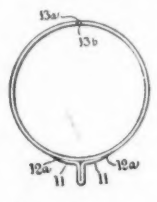


1,993,013

dry refrigerant arranged in said cabinet but out of the line of the air currents projected by said fan and non-perforate metallic projections in thermal contact with said container and closely adjacent to the blades of said fan and projecting into the path of the air current, said projections extending along the container for a distance approximately equal to the blade diameter of said fan and means under said projections for receiving the moisture collected on said projections from the air passing therethrough.

1,993,065. METHOD OF MAKING RIBBED TUBING. Albert T. Light, York, Pa., assignor to York Ice Machinery Corporation, York, Pa., a corporation of Delaware. Application May 8, 1934. Serial No. 724,626. 6 Claims. (Cl. 29—157.3.)

1. The method of producing tubing having a separately formed rib welded thereto, which comprises forming a sheet metal



1,993,065

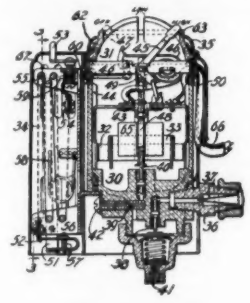
blank having a portion formed to final curvature; welding the rib to such curved portion; curving the remainder of the blank final form with the edges juxtaposed; and welding said edges together.

1,993,066. METHOD OF MAKING ONE-PIECE RIBBED TUBING. Albert T. Light, York, Pa., assignor to York Ice Machinery Corporation, York, Pa., a corporation of Delaware. Application May 8, 1934. Serial No. 724,627. 5 Claims. (Cl. 29—157.3.)

1. The method of producing tubing having a longitudinal rib which comprises preparing a sheet metal blank; folding said blank reversely on three parallel lines to form a rib composed of two plies adjacent each other; welding said adjacent plies together; then curving said blank to tube form with its edges juxtaposed; and welding said juxtaposed edges together.

1,993,116. AUTOMATIC ELECTRICAL HUMIDIFIER. Elmer A. Reid, Morrisville, Pa. Application June 16, 1933. Serial No. 676,119. 33 Claims. (Cl. 219—40.)

1. In combination with a humidistat as a means for providing automatic relative humidity regulation through control of



1,993,116

the liquid supplied for evaporation an electrical humidifier comprising an evaporating receptacle into which a relatively small amount of liquid is regulatively supplied, an electric vaporizing unit positioned in said receptacle and suitable terminals for connection with an electric circuit, interposed regulating means mountably connected with a water or steam pressure system, a cover provided with an opening or openings affording the free emission of vapors, an outer casing restricting the heat radiation of said receptacle, a sensitive hygroscopically responsive element subjected to the atmosphere and regulatively mounted on a frame with means for mounting said frame on said receptacle, and cooperative means including means for transmitting the elongations or the contractions of said hygroscopically responsive element for controlling the liquid supplied for evaporation.

1,993,129. AUTODEFROSTING REFRIGERATING APPARATUS. William F. Baird, Lexington, Mass. Application July 19, 1932. Serial No. 623,309. 24 Claims. (Cl. 62—119.5.)

12. That improvement in the art of refrigeration by the aid of refrigerating apparatus containing a refrigerant fluid and an additional fluid for equalizing pressures throughout the refrigerating apparatus and having a liquid evaporator forming a heat absorbing portion which consists in collecting in the liquid state within the liquid evaporator but insulated therefrom a substantial portion of the refrigerant fluid whenever the temperature of the liquid evaporator becomes substantially equal to the temperature of the refrigerant fluid being collected, and in automatically discharging into the liquid evaporator the collected portion of the refrigerant fluid whenever the differential of temperature between the temperature of the liquid evaporator and the temperature of the collected portion of the refrigerant fluid has thereafter appreciably increased.

1,993,130. ICE CREAM MAKING MACHINE. Lester A. Ballew, Johnson City, Tenn. Application June 27, 1933. Serial No. 677,925. 8 Claims. (Cl. 62—114.)

1. Liquid refrigerating apparatus comprising a reservoir for mix, a horizontal freezing chamber disposed in a plane below the reservoir and having an outlet at its front end, means below said reservoir for delivering measured quantities of mix from the reservoir, an injector receiving mix from said measuring means, a rotary tube extending from said injector into the rear end of said freezing chamber, a rotary shaft extending axially through said freezing chamber with its rear end detachably formed with an annular collar abutting the tube, said shaft having its rear end portion formed with a bore registering with the bore of the tube and formed with side branches extending diagonally through the collar whereby aerated mix will be discharged from the tube into the freezing chamber as a whirling spray for conversion into ice cream upon contact with walls of the chamber, a yoke carried by said shaft adjacent the front end of said chamber with its end portions projecting from opposite sides of the shaft, and scraping blades extending longitudinally of said shaft with their ends pivotally engaged with the collar and ends of said yoke, said blades being urged into engagement with walls of the chamber by centrifugal force when the shaft is rotating and serving to scrape ice cream from the walls and deliver the same through the outlet at the front end of the chamber.

1,993,159. AIR CONDITIONING DEVICE. Edwin S. George, Detroit, Mich. Application October 10, 1932. Serial No. 636,997. 10 Claims. (Cl. 261—103.)

1. An air conditioning device comprising a pair of spaced tanks adapted to contain either water or a refrigerating medium, a water-retaining medium mounted over said tanks, means for delivering water from said tanks to said retaining medium and terminating in an apertured pipe disposed above said retaining medium, and a shield inserted between said pipe and said retaining medium, partly covering the latter and disposed directly over the space between said tanks.

1,993,171. COOLING UNIT FOR REFRIGERATORS. Rollin M. Hyde, Detroit, Mich., assignor to McCord Radiator and Manufacturing Co., Detroit, Mich., a corporation of Maine. Application Dec. 15, 1931. Serial No. 581,141. 15 Claims. (Cl. 62—126.)

1. A refrigeration unit comprising a support and a pipe wrapped in spiral manner about the support, said pipe having a continuous flat side in substantially uniform contact with the face of the support to increase the heat transfer from one to the other, and also having an outer crown side provided with a fin formed in its length.

1,993,288. HEATING AND COOLING SYSTEM. Horace L. Smith, Jr., and Lucian N. Jones, Richmond, Va., assignors to Thermal Engineering Corp., Richmond, Va., a corporation of Virginia. Application Oct. 2, 1933. Serial No. 691,780. 6 Claims. (Cl. 257—8.)

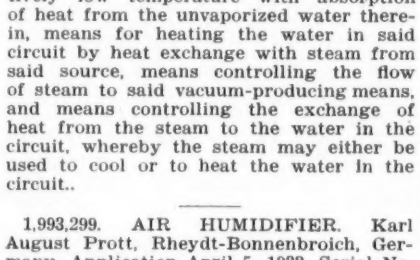
4. In a water heating and cooling system for buildings including a closed water circuit having room radiators and an evaporator connected in said circuit, a source of steam, means for utilizing steam from said source to create a partial vacuum in said evaporator whereby the water therein will boil at a relatively low temperature with absorption of heat from the unvaporized water therein, means for heating the water in said circuit by heat exchange with steam from said source, means controlling the flow of steam to said vacuum-producing means, and means controlling the exchange of heat from the steam to the water in the circuit, whereby the steam may either be used to cool or to heat the water in the circuit..

1,993,299. AIR HUMIDIFIER. Karl August Prott, Rheydt-Bonnenbroich, Germany. Application April 5, 1933. Serial No. 664,563. In Germany April 18, 1932. 5 Claims. (Cl. 261—91.)

1. A humidifier comprising a fan, a closed channel adapted to receive the air delivered by said fan, guide blades in said channel, a centrifugal wheel adapted to cast a liquid and arranged within said channel, said centrifugal wheel having a hollow shaft and tubes extending radially from said shaft, a baffle plate arranged in front of each of said tubes, and a liquid container arranged below said wheel, the hollow shaft of the latter dipping in said container.

1,993,300. MEANS AND METHOD OF REFRIGERATION AND HEATING. Bo Folke Randel, San Diego, Calif. Application Oct. 28, 1932. Serial No. 640,026. 20 Claims. (Cl. 62—169.)

1. The method of refrigeration consisting in circulating a body of refrigerant from a compression and storage space



1,993,300

through a condensing space and a refrigerating space, mechanically imparting motion to a body of the liquid refrigerant and utilizing the energy of this moving liquid to lower the pressure in the refrigerating space whereby the liquid refrigerant in this space is vaporized, returning the vaporized refrigerant along with the moving liquid to the compression space, condensing the compressed refrigerant in said condensing space, returning the resulting liquid to the refrigerating space and vaporizing a portion of said refrigerant by heat application and utilizing said vapor to assist in the circulation of the vaporized refrigerant from the refrigerating space to the compression space.

1,993,378. ABSORPTION REFRIGERATING APPARATUS. Rudolph S. Nelson, Rockford, Ill., assignor to The Hoover Co., North Canton, Ohio, a corporation of Ohio. Application July 17, 1933. Serial No. 680,751. 7 Claims. (Cl. 261—21.)

2. In absorption refrigerating apparatus, an absorber having at least three sections each consisting of a conduit having a number of bends to form a tortuous path for the flow of fluids therethrough, means for causing an absorption liquid to flow through said sections in a given sequence and means for causing an inert gas laden with refrigerant gas to be absorbed to flow through said sections in a different sequence, said last mentioned means causing the liquid to meet the gases in one section to form a solution of a given concentration, and meet the gases again in another section at a lower temperature to further increase the concentration and said last mentioned means further causing the gases to come in contact with the weak absorption liquid in still another section.

1,993,379. ABSORPTION REFRIGERATING APPARATUS. Rudolph S. Nelson, Rockford, Ill., assignor to The Hoover Co., North Canton, Ohio, a corporation of Ohio. Application July 17, 1933. Serial No. 680,752. 11 Claims. (Cl. 261—21.)

1. In an absorption refrigerating system, an absorber consisting of two sections spaced vertically from one another, means for causing an absorption liquid to flow downwardly through said sections, means for supplying a mixture of inert gas and refrigerant gas to the upper part of the lower section and for causing the gases to flow downwardly through said lower section and then upwardly through the upper section.

1,993,380. ABSORPTION REFRIGERATING APPARATUS. Rudolph S. Nelson, Rockford, and Earl Babcock, Evanston, Ill., assignors to The Hoover Co., North Canton, Ohio, a corporation of Ohio. Application Aug. 14, 1933. Serial No. 685,038. 7 Claims. (Cl. 62—119.5.)

5. A continuous absoption refrigerating system including an evaporator, an absorber constructed in two sections, means for circulating an auxiliary pressure equalizing agent between and through the evaporator and the absorber, a boiler and means for circulating an absorption liquid between the boiler and the absorber, said last mentioned means including a solution divider for dividing the stream of liquid flowing to the absorber into two streams, one for each of said sections, and an arrangement for causing the divided streams to flow horizontally at points in close proximity to each other whereby the absorption liquid may flow through said sections in parallel paths.

1,993,381. ABSORPTION REFRIGERATING APPARATUS. Rudolph S. Nelson, Rockford, Ill., and Walter C. Davidson, North Canton, Ohio, assignors to The Hoover Co., Nort Canton, Ohio, a corporation of Ohio. Application Aug. 14, 1933. Serial No. 685,039. 7 Claims. (Cl. 62—119.5.)

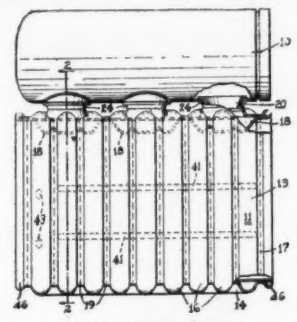
1. In a continuous absorption refrigerating system, the combination of a condenser, an evaporator, an absorber and conduit means connecting the evaporator and the absorber to provide a path for the flow of an inert gas in a cycle between the same, said conduit means including a conduit acting as a frame for supporting said condenser.

1,993,390. CONDENSER FOR REFRIGERATING SYSTEMS. Johann Heinrich Hermann Voss, White Plains, N. Y. Application March 22, 1932. Serial No. 600,418. 10 Claims. (Cl. 257—35.)

1. A condenser for refrigerating systems comprising an upper and a lower header, a plurality of vertical double, concentrically arranged pipes establishing communication between said headers and supported thereby, the ends of the outside pipes extending close to the opposite walls of the headers with space enough to allow a free passage of the entering hot gas freed of its superheat the gas being condensed in the space between the concentric pipes and the condensed liquid refrigerating agent falling into the lower header, said pipes bunched to form a compact single piece condenser.

1,993,459. EVAPORATOR. Franklin G. Slagel, Buffalo, N. Y., assignor to Fedders Mfg. Co., Inc., Buffalo, N. Y., a corporation of New York. Application Dec. 31, 1931. Serial No. 584,211. 6 Claims. (Cl. 62—126.)

1. An evaporator comprising a header, a chamber forming housing, said housing having a plurality of manifolds in the top wall and duct means in the side walls leading from the manifolds, and con-



1,993,459

necting means between the header and the housing, said connecting means forming a communication between the interior of the header and the manifolds.

1,993,498. HUMIDIFIER. Leonard B. Winterfield, St. Paul, and Walter L. Bush, Minneapolis, Minn., assignors, by direct and mesne assignments, to said Bush. Application April 22, 1933. Serial No. 667,402. 10 Claims. (Cl. 257—138.)

3. A humidifier having in combination a cabinet closed except at its bottom, a radiator mounted in the lower part of said cabinet, a drum mounted in said cabinet above said radiator and having an inlet opening within said cabinet spaced from one wall thereof, said drum having an outlet through one wall of said cabinet, said drum confining the travel of air upwardly from said radiator to a point between said inlet and the adjacent spaced wall of said cabinet, a fan mounted within said cabinet adjacent said inlet opening, spray means mounted within said drum forward of said fan, and means for supplying water to said spray means.

1,993,518. REFRIGERATING MACHINE. Guido Maiuri, Aldwych, London, England, assignor to Maiuri Refrigeration Patents Limited, Aldwych, London, England. Application April 17, 1934. Serial No. 720,977. In Belgium June 9, 1933. 3 Claims. (Cl. 62—118.)

1. In a refrigerating machine, a vessel, vertically superposed piping in said vessel, a weir in said vessel above said piping, means supplying liquid to said weir and a wick dipping into said liquid and depending directly above said piping.

1,993,539. APPARATUS FOR CONDITIONING AIR. George R. Anthony, Wellesley Hills, and Thomas F. Hickey, Newtonville, Mass. Application April 3, 1933. Serial No. 664,098. 4 Claims. (Cl. 257—9.)

1. Air conditioning appartus comprising a blower, an up-take extending upwardly therefrom, a junction housing at the upper end of said up-take, the housing comprising an apertured bottom piece secured to the upper end of the up-take, a top piece above the up-take, and a series of side pieces enclosing a chamber between said bottom and top pieces, said side pieces consisting of one or more distributing units and a sufficient number of blanking plates to complete the enclosure of said chamber, said units and plates being interchangeable with each other.

Leybourne Will Handle Spartons & Crosleys

TOLEDO — Albert C. Leybourne, formerly secretary of the Toledo Radio Co., has opened the Leybourne Electric Shop at 1616 Broadway here. The firm is handling Sparton electric refrigerators and radios, Crosley refrigerators, and Speed Queen washers.

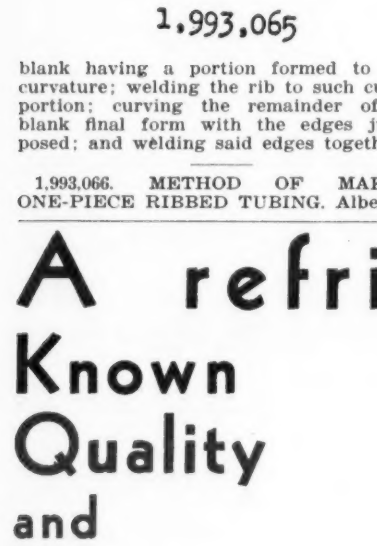
A refrigerant of Known Quality and Proven Merit

EXTRA DRY ESOTOO VIRGINIA SMELTING (Liquid Sulphur Dioxide)

Refrigerator manufacturers and service men all over the world have found that refrigeration problems become simpler when they standardize on EXTRA DRY ESOTOO—and have thereby enhanced their prestige and profits.

They can always rely on its purity—and world-wide distribution through 49 agencies makes it easy to obtain, wherever you are.

You are invited to consult with us on any refrigeration problem.



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☐ Circular: Physical properties of various refrigerants
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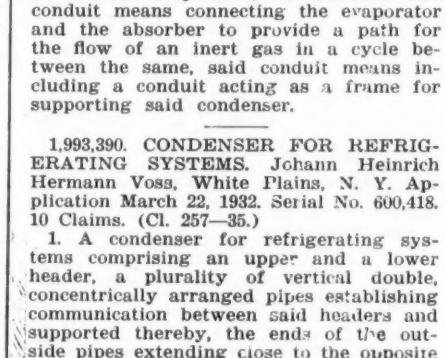

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COMMERCIAL EVAPORATORS
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METLFLEX ICE TRAYS
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SPIRAL COPPER FINNED IRON, STEEL OR COPPER PIPE

McCORD RADIATOR & MFG. CO. DETROIT

ENGINEERING

Stainless Steel Used In New Ranco Type K R Thermostat

COLUMBUS — The newest Ranco thermostat, type K R, recently introduced by the Automatic Reclosing Circuit Breaker Co., uses stainless steel in the construction of its base, frame, and case.

With the exception of the moulded block of heat-resisting insulation which carries the terminals and the overload coil, all parts of the type K R thermostat are of bronze or stainless steel. This material is guaranteed to be permanent in ordinary atmospheres, and because it changes rapidly in temperature with outside temperatures, accumulation of moisture is considerably lessened.

Plates, brackets, springs, and levers are securely mounted, and, though the unit is compact, clearances are liberal and friction has been cut to a minimum.

All parts are readily accessible. Differential adjustments can be made from the outside of the thermostat, and snap side plates, also of stainless steel, can be quickly removed for free access to the working parts.

Another feature of the new Ranco is the construction of the overload unit. The heating coil is permanently centered, eliminating the necessity for positioning the coil after mounting. The heating coil is completely covered by a special ceramic material.

The cylindrical tube containing the resistance coil fits closely into a solder well, for protection against vibration and faulty mounting. This construction, Ranco engineers say, keeps the overload coil from warping and thereby changing the overload rating. Because of the location of the element inside the body, heat from the overload coil is used more efficiently.

The motor-protecting action of the melting of the solder, and the release of the body, is quick and positive because of the direct heat radiation from the overload coil from the inside of the body.

This change in construction of the overload element, according to R. R. Dunlop, vice president of the company, is expected to reduce service troubles.

Harry Alter Co. Catalog Lists Refrigerator Parts

CHICAGO — The Harry Alter Co., distributor of radio, electrical, and refrigeration parts and supplies, has just issued a 64-page catalog listing a complete line of parts for refrigerator service men and dealers. The catalog is devoted exclusively to refrigeration supplies.

In addition, the catalog lists controls, coils, and units for uses ranging from domestic jobs to air-conditioning installations; service men's tools, beer fittings, gaskets, motor brushes, bushings, belts, and copper tubing.

A feature of the catalog is the enumeration of various flapper valves and seals for replacement parts on Frigidaire, Kelvinator, Majestic, Copeland, Universal, Zerozone, and Trupar machines.

Products listed in the catalog include those of Imperial Brass Mfg. Co., Detroit Lubricator Co., Fedders Mfg. Co., Penn Electric Switch Co., Cutler-Hammer Co., Dayton Rubber Mfg. Co., C. J. Tagliabue Mfg. Co., Electrimatic Co., Mayson Mfg. Co., Brunner Mfg. Co., C. S. Gauge Co., Kraeuter Co., and Prest-O-Lite Co.

Minneapolis-Honeywell Holds Sales Meeting In Detroit

DETROIT—Officials of the Minneapolis-Honeywell Regulator Co. conducted one of their annual series of conferences at the company's branch office here last week. William F. Arnoldy, manager of the Detroit branch, was in charge of the conference.

Other Minneapolis-Honeywell officials present for the sessions included H. W. Sweatt, president and general manager; C. B. Sweatt, vice president in charge of sales; W. L. Huff, vice president and treasurer; George L. Kingsland and J. W. Pauling, vice presidents; G. B. Benton, advertising manager; R. L. Goetzenberger, manager of the process division; S. C. Shipley, chief engineer; F. S. Denison, consulting engineer; and Addison Lewis of Addison Lewis Associates, advertising agency.

R. P. Brown, president of the Brown Instrument Co., recently merged with Minneapolis-Honeywell, and L. Morton Morley, vice president in charge of sales, were also in the party.

Both sales and net profit of Minneapolis-Honeywell showed increases of 20 per cent in 1934 over the preceding year, officials of Minneapolis-Honeywell reported at the meeting.

South Africa Lifts Duty On Refrigerants for Conditioning Mine

WASHINGTON, D. C. — The governor-general of South Africa has declared, effective Jan. 18, a "rebate of customs duty on refrigerants for refrigerating and air-conditioning plant and equipment used in mining" in that country, according to a report made by the Department of Commerce by Consul William E. DeCourcy, Capetown.

The governor-general's proclamation, published in the South African Government *Gazette* of Jan. 18, is as follows:

"Whereas by section 12 (k) of the Customs Tariff and Excise Duties Amendment Act, 1925 (Act No. 36 of 1925), as amended, the Governor-General may, by proclamation in the *Gazette*, declare that subject to regulations set out in such proclamation, there shall be allowed a rebate of the whole or any part of the duty otherwise payable under the aforesaid act, as amended, on any article which is a raw material or essential requisite of any industry in respect of which the Board of Trade and Industries recommends such a rebate;

"And whereas the Board of Trade and Industries has recommended that the customs duty on the undermentioned articles imported into the Union for use in the industry specified, be rebated to the extent of the full ordinary duty thereon;

"Now, therefore, under and by virtue of the powers vested in me as aforesaid, I do hereby declare, proclaim, and make known that on and after the date of the first publication of this my Proclamation in the *Gazette* shall, subject to the subjoined regulations, be allowed on the following articles when imported or taken out of bond by a manufacturer for use in the respective industry specified hereunder:

"Mining Industry: Refrigerants for refrigerating and air-conditioning plant and equipment used in mining."

New Head-Pressure Valve Marketed by Automatic Products

MILWAUKEE — Automatic Products Co. has introduced a new model 67 head-pressure water valve, designed to regulate the flow of the cooling water for the condenser on commercial refrigeration and air-conditioning units, and to maintain the condensing pressure at the desired operating point.

The valve is actuated by the actual pressure in the head of the compressor, through a direct line run to it from the cylinder head. As the pressure increases in the compressor, the bellows in the valve is compressed, opening up a small by-pass.

The main valve of the model is opened by a diaphragm. As the water passes through the by-pass, it builds up pressure on the diaphragm, which in turn opens the main valve. A throttling action takes place.

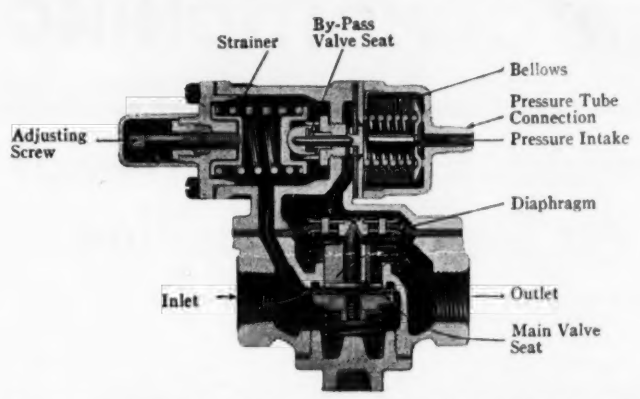
When the pressure in the compressor drops, the bellows is no longer compressed and returns to its original position by means of the spring in the valve, cutting off the by-pass pressure. The main valve is opened against a spring, and as the pressure is cut off the valve closes immediately.

Any desired operating pressure can be obtained by means of the adjusting screw.

All parts of the valve are of brass or non-ferrous material. A monel metal strainer is incorporated in the by-pass valve to keep it clean, and by-pass and main valve seats are of special composition. The bellows have a short movement, to insure longer life. Springs are non-ferrous, two being used to reduce pressure in the by-pass valve seat.

All parts of the valve are easily accessible. The bellows assembly housed in the drop-forged case can be removed without losing any of the refrigerant charge. The entire valve is in black crinkle finish. Connection for the pressure line is standard for ¼-in. flared copper tubing fitting.

New Automatic Water Valve



The above cross-section photograph shows the methods of operation of head-pressure water valve recently developed by Automatic Products Co.

Refrigerator Belt Sizes Listed in New Guide

DENVER — Approximately 3,000 models of refrigerators and air conditioners, washing machines, stokers, oil burners, domestic water systems, wood-working machines, and other light machinery are listed with their belt sizes in a new 96-page belt guide recently published by the Gates Rubber Co., of this city.

The new catalog is tab-indexed to facilitate finding the belt required for any model machine, or a model to fit a given belt size. Belt specifications are also listed.

Moores, Tatum Address Philadelphia Group

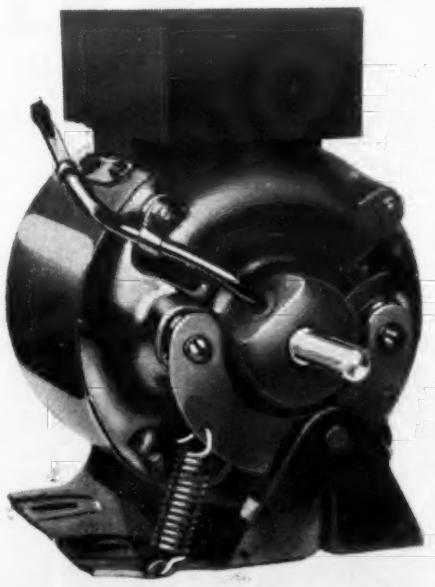
PHILADELPHIA — C. F. Moores, president of the C. F. Moores Co., assembly organization for the Rome-Turney Radiator Co., and Mr. Tatum, of the Electric Refrigeration Motor Co. were speakers at the March meeting of the Electric Refrigeration Association of Philadelphia. Mr. Moores discussed room cooling and air conditioning, and Mr. Tatum, refrigeration motor repair work.

Proposal for a local ordinance or code was tabled for the present, members of the organization feeling that their efforts in this respect would be more productive after membership had been increased.

The members' credit bureau, recently formed, is being reorganized for the coming season, to give members a better knowledge of their credit risks.

ALL DELCO MOTORS HAVE DIAMOND BORED BEARINGS

To insure permanent quietness, a motor must have not only well lubricated bearings but also bearings which are accurately machined. The bearing surface must be smooth and the machining must be accomplished so as not to injure the crystalline structure of the bearing material. Accurate clearances must be maintained. To accomplish these objectives it is necessary that the bearings be diamond-bored—which is standard practice on all Delco motors. It is largely due to this precision operation that Delco motors are so well known for their quietness and dependability, and so widely used by manufacturers of the better household appliances.



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Made in Canada by the McKinnon Industries, Ltd., St. Catharines, Ont.

Artic
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(DU PONT METHYL CHLORIDE)
FOR DEPENDABLE SERVICE WORK

Low in both moisture and acid contents. ARTIC assures freedom from corrosion worries and enables service engineers to build a satisfied, steady trade.

ARTIC has been in use for 15 years.• Proven satisfactory in a great many automatic units for commercial, household and air refrigeration. Now available for service work from stock points in all parts of the country.

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THE R. & H. CHEMICALS DEPT. WILMINGTON, DEL.

"Do As Machine Builders Do—Use ARTIC"

AIR CONDITIONING

Chrysler Exhibits Airtemps At Detroit Exposition

DETROIT—Refrigeration and air-conditioning exhibits were prominent at the Detroit and Michigan Exposition held in Detroit's Convention Hall during the week of March 9 to 17.

Of greatest interest was the exhibit of Chrysler Airtemp equipment which was publicly shown for the first time in Detroit at the exposition. Various unit air conditioners of both self-contained and remote types were shown, cabinets displayed being in a variety of colors including mahogany, red, and green.

The 1-ton, floor-type room cooler for remote installation which was displayed uses cold water for cooling in summer and space is provided for both cooling and heating coils, making it possible to provide all air-conditioning functions.

Another exhibit was the 2-ton, floor-type job, a direct expansion unit for remote installation, with separate humidification and separate heating coils to be added for winter conditioning.

The ¾-ton room cooler shown at the exposition is completely self-contained, providing conditioning for year-'round use. Another model was a ¾-ton floor-type room cooler for remote installation, also an all-season job.

Most significant piece of equipment in the Chrysler display was the 5-hp. model 500W condensing unit, bearing the Airtemp nameplate. Freon is used as refrigerant with 45° water.

Compressor speed is 480 r.p.m., with 3¼-in. bore and 3-in. stroke. The compressor is belt-driven and employs a 5-hp. Wagner motor.

At the present time, Universal Cooler Corp. of Detroit is manufacturing the Airtemp condensing units up to 15 hp., while York Ice Machinery Corp. of York, Pa., is building the big compressors up to 125 tons. Both companies are making the units according to specifications set down by Chrysler engineers.

It is understood that this contract to manufacture is a temporary arrangement and that the Amplex division of Chrysler is going to make refrigeration units for Airtemp equipment and plans to be on a production basis within a short time.

Airtemp expects to be in a position to take on any air-conditioning job from a single room in a private home to a complete apartment house or office building conditioning contract.

Air Conditioning Corp., distributor for General Electric air-conditioning equipment, displayed a General Electric oil furnace and a duct-type air conditioner providing all-season functions when used in conjunction with the oil furnace.

Also on exhibition was a portable, self-contained room cooler with a capacity of 4/10 tons of refrigeration per hour. A 5-hp. General Electric condensing unit was also included in the display.

Republic Supply Corp. and Good Housekeeping Shop, distributor and dealer, respectively, of Fairbanks-Morse refrigerators and Zenith radios, exhibited several of the Fairbanks-Morse Conservadors and a number of Zenith radios.

Dupraw's, a local refrigeration dealer, had a sizeable display of Kelvinator and Grunow models. Detroit City Gas Co. showed a number of Electrolux gas-operated models and also a line of gas ranges.

Several exhibits of winter air-conditioning equipment were in evidence, including displays by Timken Silent Automatic Co., National Steel Furnace Co., Ideal Furnace Co., and Gar Wood Industries, Inc.

Kelvinator Sales Corp. presented a large display of Kelvinator household and commercial equipment. About a dozen 1935 Kelvinator household refrigerators were shown and several models of the 1935 water cooler line of both bottle and pressure types were included in the exhibit.

Kelvinator oil burner equipment included three oil burner models, K-1, K-2, and K-3 and a boiler-burner unit, model KB-1. In the air-conditioning line the models displayed included a 1935 self-contained room cooler, a floor-type cabinet for remote installation and a ceiling-type remote unit.

Of special interest was a self-contained room cooler displayed under glass. The Kelvinator model WV 61500H condensing unit included in the display was a 15-ton 4-cylinder unit recommended for air conditioning and larger commercial installations. The display also included a forced-convection unit type cooler.

Caswell, Inc., Detroit General Electric distributor, exhibited a large line of General Electric household refrigerators including models of Monitor Top, Ball Top, and Flat Top lines.

COVERAGE

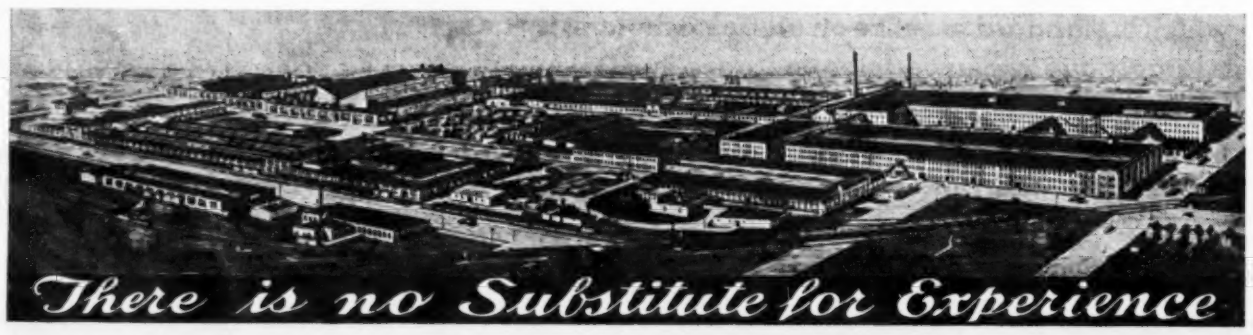
Servel's wide range of capacities and applications places the dealer in the profitable position of being able to meet any and every requirement of the average Commercial Refrigeration or Air Conditioning prospect — exactly and accurately! Servel machine units range in capacity from one-twentieth of a ton to ten tons.

SERVEL

COMMERCIAL REFRIGERATION

SERVEL, INC. *Commercial Refrigeration Division* EVANSVILLE, IND.

This great modern 30-acre plant is the home of Servel Commercial Refrigeration and the world-famous Electrolux, the Servel Gas Refrigerator



Houston Dealers Form Air-Conditioning Association

HOUSTON, Tex. — To promote the sale and use of air-conditioning equipment in Houston and its vicinity, the Houston Air-Conditioning Association has been organized by a group of local air-conditioning dealers and engineers.

George Patillo, of the Houston Lighting & Power Co., was elected permanent chairman of the association, and was instructed to appoint a committee to frame by-laws, on which members will vote at their next meeting.

Need for Public Education

The organization is the outgrowth of an opinion among dealers that there is a need for public education in air conditioning, for industrial, commercial, and domestic use, especially in this territory, which is subject to extreme climatic conditions at times.

Dealers represented in the association include: Ben C. Duffie, Jr., and John A. Rollosson, Robischung-Kiesling, Inc.; D. H. Straus and H. Brockmeier, Straus Bodenheimer Co.; Robert D. Straus and E. P. Renouf, Straus Frank Co.; H. L. Martin, Automatic Sales Co.; L. C. Way, Way Engineering Co.; P. N. Vinther, York Ice Machinery Co.; H. H. McGilvary, Southern Engine & Pump Co.; M. E. Philips, Texas Automatic Sprinkler Co.; D. S. Cooper, Edmundson Refrigerating Corp.; and H. F. Staacke, F. M. Austin, E. F. Wilson, W. F. Jenkins, and Mr. Pattillo, Houston Lighting & Power Co.

Oil-O-Matic to Open Meetings March 28

BLOOMINGTON, Ill.—The story of Williams Oil-O-Matic sales and advertising plans for 1935 will be given to distributors and dealers along the Atlantic seaboard at four regional conventions beginning March 28 in Boston and ending April 12 in Washington, D. C.

The Boston meeting, March 28 and 29, will be in the Kenmore hotel, the New York City meeting, April 4 and 5, in the Taft hotel, the Philadelphia meeting, April 8 and 9, in the Broadwood hotel, and the Washington meeting, April 11 and 12, in the Washington hotel.

Promotional Plans Outlined

The new Oil-O-Matic models will be shown at the meetings, and advertising and sales promotional plans for the year outlined. Manufacturers of accessories and allied products—including boilers, controls, fuel oil—will be present, along with the company's eastern dealer organization.

The program for the first day of the convention will get under way at 1 p. m., but the display will be open for inspection all during the morning. After 1935 possibilities and plans are outlined to those present, Lyle Straight will lead a singing session. The rest of the afternoon will be taken up with a presentation of Oil-O-Matic products. Earl Nesmith will have charge of this phase of the meetings. H. B. Delavan of the Penn Electric Switch Co. will explain the controls.

Boiler Burner Market

On the second day, morning session will be devoted to a discussion of the boiler burner market by Mr. Nesmith and W. J. Brevitt. Representatives of Bell & Gossett, McDonnell-Miller, Fitzgibbons Boiler Co., Kewanee Boiler Co., Burnham Boiler Co., and American Radiator Co., will also be speakers at this session.

Mr. Brevitt will next discuss finance problems and plans, after which representatives of Orr & Sembower, Inc., National Radiator Co., and the Malleable Steel Range Mfg. Co., will speak. Earl Ross will discuss the dealers' opportunity and responsibility with the Oil-O-Matic and allied lines.

After luncheon, Mr. Straight will conduct another singing bee, and a representative of a fuel oil organization will discuss that phase of dealers' work. The company's 1935 advertising and promotional plans will be outlined by D. M. Frank, and E. H. Davison will speak on dealer organization. The convention will close with a discussion on retail sales.

Friez Develops New Line of Thermostats & Humidity Controls

BALTIMORE—Julien P. Friez & Sons, Inc., manufacturers of weather instruments, is introducing a new range of thermostats and humidity controls for use with domestic, commercial, and industrial air-conditioning equipment.

The new line of thermostats, especially designed for the more exacting requirements of modern air conditioning, are said to be sensitive to temperature changes as low as plus or minus ½° F., and have special features that eliminate the possibility of chatter.

Summer-Winter Switch

Refinements on these instruments include the inclusion of summer-winter manual switches built into the instrument case, and interwired so that all types of heating and cooling equipment can be operated off a single instrument both summer and winter. Switches are either of the ordinary toggle type, or (for use in public buildings) can be furnished for key operation.

Changing the position of the summer-winter switch reverses the position of the electrical contacting within the instrument so that heating equipment is started on falling temperature in the winter and cooling equipment on rising temperature in the summer.

Insertion Controls

The new insertion humidity and temperature controls are designed for insertion into ducts, through walls, etc., or for insertion through the cases of air-conditioning cabinets, incubators, test chambers, and the like.

The instruments are available either closely graduated in per cent relative humidity from 10 to 100 per cent, or in a variety of temperature ranges, and will provide control of humidity to within plus or minus 1 per cent R. H., or temperatures to within plus or minus ½° F.

The Friez Co. is also introducing a range of humidity controls not of the insertion type to meet the requirements of modern comfort and industrial conditioning.

Exterior Finish Changed

These humidistats have multiple human hair elements of the same type used on sensitive meterological instruments built for the U. S. Weather Bureau and all types of industrial and educational research.

In addition to improvements in details, exterior finish of the controls has been improved to increase attractiveness and protect them against corrosion, even from the stronger acids.

Control to within plus or minus 1 per cent relative humidity is said to be possible with these humidstats. Setting is by bakelite knob, and rotating dial, and a range of from 10 to 100 per cent R. H. is provided.

74 Air Conditioners Are Sold in Cincinnati

(Concluded from Page 1, Column 1)

city. Twenty-five installations of this type were reported last year, against a total of 18 in all previous years.

Two air-conditioning systems were also installed last year in the city's large stores, with 640 connected hp. rating. No installations of this sort had been made in 1933, and only two prior to that time. Adoption of air conditioning by restaurants held up well during the year, five installations being reported against seven of this type in 1933, and five in all previous years. Tendency was toward smaller systems, however, total connected hp. for installations being 59 in 1934, compared with 100.5 in 1933, and 150 before that time.

Other installations reported for the year included three theaters, a hospital, and 41 unclassified or miscellaneous uses.

The trend in Cincinnati, as in most other cities covered by surveys last year, was in the direction of systems of average smaller hp., as can be noted from the following table:

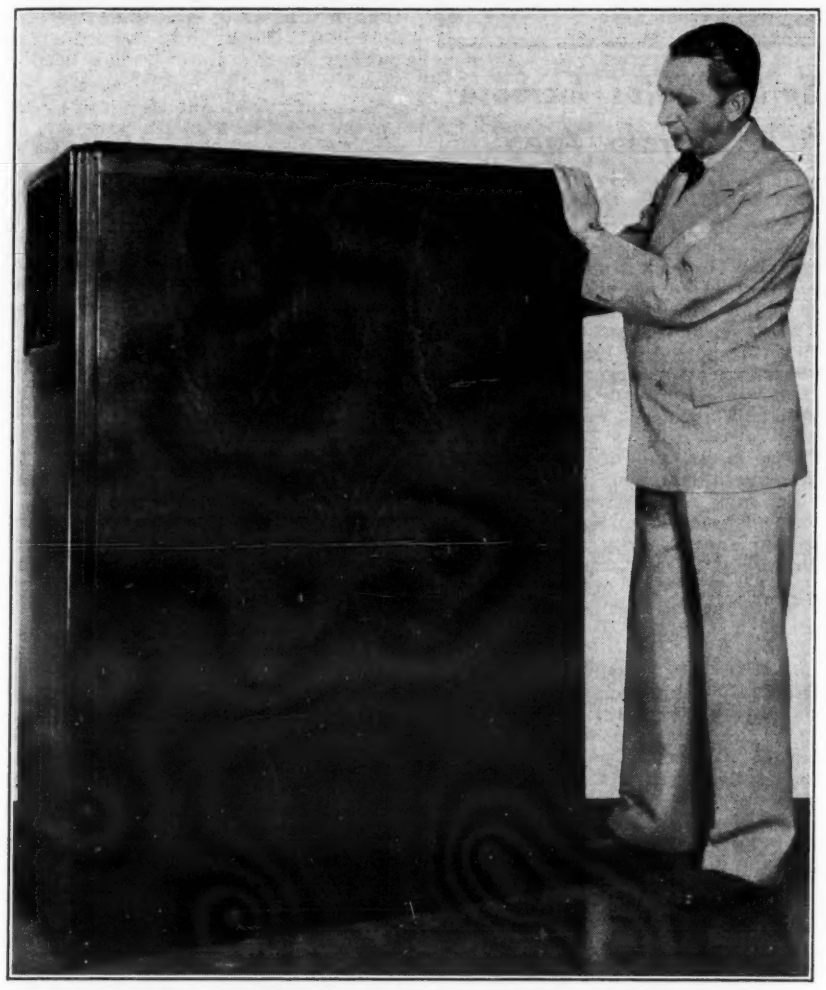
	No. of Installations	Total Connected Hp.	Average Hp. Per Installation
During 1934..	74	1,319.75	17.82
During 1933..	32	485.5	15.17
Before 1933..	43	3,676	85.5

Cincinnati Air-Conditioning Installations

Type of Establishment	Prior to 1933 No.	Prior to 1933 Hp.	During 1933 No.	During 1933 Hp.	During 1934 No.	During 1934 Hp.	Total Thru 1934 No.	Total Thru 1934 Hp.
Residences	8	14.5	6	12.5	25	35.25	39	62.25
Offices	8	19.5	10	34.5	25	127	43	181.00
Small Stores	4	25.5	1	20.0	10	221	15	266.50
Large Stores	2	405.0	..	..	2	640	4	1,045.00
Restaurants	5	150.0	7	100.5	5	59	17	309.50
Theaters	6	1,357.5	3	280.0	3	177.5	12	1,815.00
Hospitals	2	6.0	2	20.0	1	19	5	45.00
Hotels (Including Restaurants	3	1,321.0	..	..	..	..	3	1,321.00
Miscellaneous	5	377.0	3	18.0	3	41	11	436.00
Totals	**43**	**3,676.0**	**32**	**485.5**	**74**	**1,319.75**	**149**	**5,481.25**

AIR CONDITIONING

'Doc' Harlan Looks It Over



J. A. Harlan, manager of Kelvinator's commercial refrigeration division, studies the exterior of a new self-contained air conditioner which Kelvinator is announcing in this issue of the News.

Kelvinator Brings Out Larger Line of Air-Conditioning Equipment

(Concluded from Page 1, Column 1)

constructed for forced air flow. The bottom of the fins are saw-toothed, and the air flows downward in the same direction as the water (condensed moisture from the air) falls by gravity. The air flow is so directed as to assist the water in reaching the drain outlet, and re-evaporation during the off cycle is thus minimized.

Temperature of the air within the air-conditioned space is controlled by a thermostat which in conjunction with a liquid line solenoid valve and low-pressure control, starts and stops the condensing unit.

Self-contained models are also equipped with an automatically operated by-pass damper.

Heating coils may be installed in all but one self-contained model, and may be used with hot water or steam. Humidifying equipment may be installed in models which accommodate heating coils.

Air is taken into the units through grilled openings at both ends of the cabinet and ejected into the room through a grilled opening in the top. Two filters are used, one in each inlet opening. All fans are of the centrifugal type, fan wheels being of the slow speed type, having a large number of blades.

A master switch having three speed positions and an "off" position, which, when turned to any one of the three speed positions, automatically energizes all control circuits, is furnished with all except one model.

The floor-type cabinet conditioners are much the same as the self-contained models, except of course, the compressor is remotely installed. Thermostat, humidistat, and liquid line solenoid valve are not included with the floor-type models, but must be ordered separately, as required.

Controls furnished with these units are thermostatic expansion valve, air by-pass damper and motor, three-speed fan switch (air by-pass damper not furnished with units providing controlled temperatures only).

Each unit is equipped with a heat exchanger to increase the capacity of the condensing unit and prevent condensation on the suction lines.

Cabinets for the self-contained and room-type conditions are constructed of furniture steel, finished in grained walnut. To facilitate installation and inspection the inlet and outlet grilles, air filters, and panels are removable. The cabinet is reinforced with an angle iron frame, riveted and electro tin plated. All parts of the unit which are subjected to moisture are made of copper, tinned on both sides.

Cabinets Insulated

Cabinets are insulated with heat insulating and sound absorbing material.

Full line voltage may be employed for these units whenever such voltage and the power load do not exceed the rated capacity of the thermostat and/or humidistat. Whenever line voltage exceeds the rated capacity of the thermostat and/or humidistat, such voltage must be reduced to within the rated capacity, through the use of low voltage wiring or a transformer. Whenever the power load exceeds the rated capacity of the thermostat and/or humidistat, a relay must be used.

The suspended-type units have the same division into series as the cabinet conditioners. One series provides for temperature control and controlled dehumidifying, and the other series provides for temperature control only. Heating coils and dehumidifying apparatus can be installed for winter conditioning.

Same Coil Construction

Coils used in suspended-type models are of the same type of construction as those used in the other conditioners, being especially designed for forced air flow and proper drainage of condensation.

Capacities in the suspended-type units range from .80 to 10.25 tons.

Thermostat, humidistat, and liquid line solenoid valve are not furnished with these units, but must be ordered separately, as required.

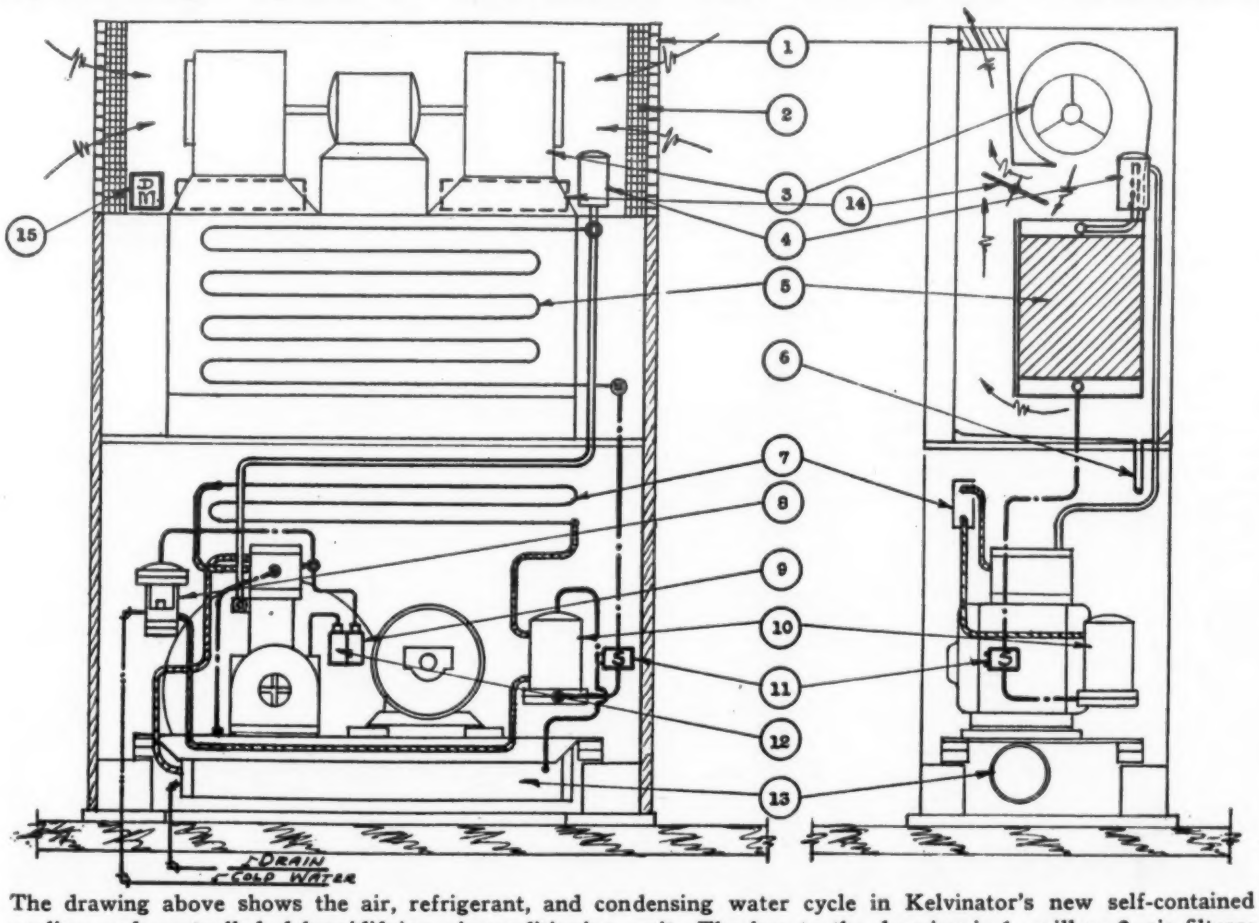
Air discharge outlets are located in the front of the unit. The grilles must be ordered separately to suit the particular requirements, as they are not furnished with the unit. Where the unit is to be mounted outside the room being air conditioned, a canvas connecting collar can be cemented and strapped to the fan housing for attachment to a duct distributing system.

Cabinet is constructed of sound absorbent panels attached to angle iron frame. The cabinet is given a neutral color prime coat only, to permit the application in the field of finishing to match surrounding. Filters are located in the air inlet in the top of the unit.

Crosley Distributor in England Visits U. S.

CINCINNATI — E. K. Balcombe, managing director, A. J. Balcombe, Ltd., London, distributor for Crosley electric refrigerators for Great Britain and the Irish Free State, recently returned to England on the Majestic, following a visit to the United States. While here he spent three days at the Crosley factory.

Operating Cycle of Kelvinator Self-Contained Conditioner



The drawing above shows the air, refrigerant, and condensing water cycle in Kelvinator's new self-contained cooling and controlled dehumidifying air-conditioning unit. The key to the drawing is 1, grilles; 2, air filters; 3, centrifugal fans; 4, accumulator; 5, direct expansion coils; 6, condensation drain; 7, condensing unit heat absorber; 8, water regulating valve; 9, high pressure cut out; 10, high side float valve; 11, liquid line solenoid valve; 12, low pressure control; 13, condenser and receiver; 14, by-pass damper; 15, damper motor.

BUYER'S GUIDE

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SPECIAL ADVERTISING RATE (this column only)—$12.00 per space.
Payment is required monthly in advance to obtain this special low rate.
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KRAMER — KX COIL

All Copper insures highest heat conductivity

SEND FOR CATALOG!

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210-212 West 65th St. New York City — TRENTON New Jersey — 5114 Liberty Ave. Pittsburgh, Pa.

OVERSIZE DIAL PLATES

ON all Ranco KRS Models oversize dial plates are available for large mounting panel holes and will be furnished in place of standard plates at no extra cost.

This, and many other time and labor saving features, make the Ranco KRS a thermostat well suited for the replacement needs of practically every household refrigerator, water cooler and ice cream cabinet. For complete information write for our Service Men's Bulletin 628.

RANCO THERMOSTAT

THE AUTOMATIC RECLOSING CIRCUIT BREAKER CO., Columbus, O.

CONDENSING UNITS AND COMPRESSORS FOR HOUSEHOLD REFRIGERATION BY

JOMOCO, INC.

A SUBSIDIARY OF THE JOHNSON MOTOR CO.
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CABLE ADDRESS: JOMOCO-WAUKEGAN

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A new condensed catalog is now available describing all the A-P Automatic Controls. It contains solenoid valves for refrigerant and water control. A new head pressure water valve, room thermostats, relays and other controls used for air conditioning and refrigeration.

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Type X

The **DAYTON CARRIER TRUCK**

Deliver your Refrigerators on Rubber

Will Not Mar—Speeds Delivery

Two sizes—Type X with 53 inch handles and 8 inch rubber wheels—Type Y with 70 inch handles, 5 inch rubber wheels and skids.

Type X with one strap $17.00
Type Y with one strap 18.00
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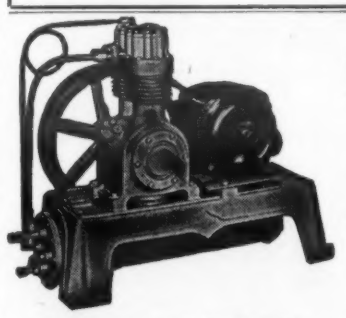
International Engineering Inc.
Dayton, Ohio — 15 Park Row, N. Y.



STARR FREEZE
OUTSTANDING PERFORMANCE
attested by satisfied users
— EVERYWHERE!

Sturdy Condensing Units from 80 to 2868 Lbs. I.M.E., and all other commercial refrigeration equipment—Wall type cases with machinery—A beautiful household line of modern, conservative styles—Write for full data.

Style EW—Water Cooled With Water Cooled Head

THE STARR COMPANY
Cable "Starr" — Richmond, Indiana (factory) U. S. A. — Since 1927
1344 S. Flower St., Los Angeles, Calif.

STANDARD REFRIGERATING APPLIANCES

AUTOMATIC SUCTION PRESSURE THROTTLING VALVE

Write for bulletin on complete line covering refrigerating appliances, liquid line filters, dehydrators, acid neutralizers, standard parts and materials, service tools, shaft seals, bearing metals and parts. Descriptive literature will be gladly furnished on any or all of these lines on request.

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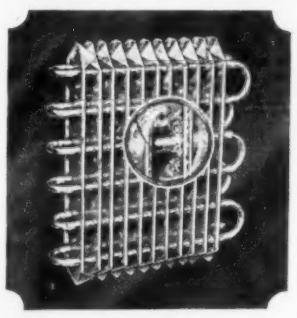

CONDITIONAIRE FIN COILS

The Coil with a Permanent Fin Contact

Standard size for every commercial application—
Suitable for all refrigerants—
Greater conductivity, greater efficiency—
Special sizes for air conditioning.

Write for Complete Data Book

CONDITIONAIRE UNIT COMPANY
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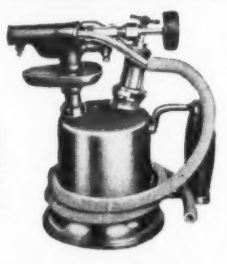
HULL *Improved* Leak Detector

The most convenient, surest and quickest means of detecting and locating Halide Gas Leaks in refrigerating units.



Positive, Instantaneous
. . . most sensitive and accurate

Improved burner design, "Y" suction tube and non-clogging feed valve make the HULL Detector the most efficient for all testing and servicing requirements. Recommended and used by manufacturers of Halide Refrigerant Gases, equipment manufacturers and engineers everywhere. Low first cost and inexpensive operation.

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A convenient way to keep your back issues of the News

We offer a binder designed and made especially for keeping your file copies of Electric Refrigeration News neat and always available for ready reference.

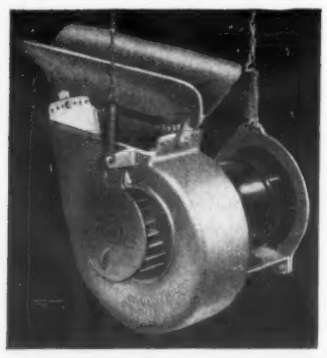
It is made of stiff board covers, attractively bound in good quality of black imitation leather. The name Electric Refrigeration News is stamped in gold on the front cover and backbone.

The price is $3.75 shipped to you post paid in the United States and Possessions and Pan-American Postal Union countries. For all Foreign countries, postage based on a shipping weight of 6 pounds must be added to this price. Send your remittance with order. May we send you one?

Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

Just Out New Catalog

Refrigeration PARTS and SUPPLIES
Send for New Catalog No. 109
The HARRY ALTER CO.
1728 S. MICHIGAN AVE. CHICAGO, ILL. U.S.A.
8,000 ITEMS FOR ALL MAKES
DOMESTIC COMMERCIAL AIR CONDITIONING



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A diffused air system for Walk-In Coolers. No changes required in present set-up. Endorsed by National packers, abattoir companies, wholesalers and retailers. Three years of successful operation

Shrinkage is of paramount importance in the meat industry.

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Certain territories open for good distributors

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Vol. 11—Jan. 3 to April 25, 1934. (Serial Nos. 250 to 266.)
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Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

Outstanding Specialists in Moving Equipment

The heavy duty X-70 Refrigerator Truck fits all cabinets with or without legs or in the crate. Prevents damage to the cabinet, floor or walls. Only pads touch cabinet. Sturdy all-steel frame. One truck with top casters and handles for tilting and rolling into delivery truck and on stairs. Complete set $34.50. Ball bearing swivel casters on one end $5 extra.

The Balance Refrigerator Truck (shown)

Ideal for heavy boxes, crates, stoves and furniture. Padded nose piece has instant, exact adjustment. Price $25. Write for free circular.

Self-Lifting Piano Truck Co.
Findlay, Ohio
Manufacturers of Trucks Since 1901

STATISTICS

21,455,799 American Homes Have Radios, Columbia Estimates

NEW YORK CITY—A large number of persons, heretofore unknown, have recently been discovered as members of the American radio audience, through a survey conducted by the Columbia Broadcasting System.

Results of the survey showed 2,450,000 radio owning homes with over 8,000,000 listeners which had been lost, strayed or stolen in previous counts.

With the addition of the newly discovered "stray lambs," the radio home total counted by Columbia reaches 21,455,799 as of Jan. 1, 1935. On the basis of 3.3 listeners per home Columbia estimates that there are 70,804,137 radio listeners over 10 years of age in the country at the present time.

Back in 1930 U. S. Census Takers counted 12,048,000 radio homes throughout the country and since 1930 the Columbia Broadcasting System and McGraw-Hill Publishing Co. have cooperated to keep a record of the increasing radio audience. The first inkling that the 2½ million radio homes had been mislaid came to the networks through the experiences of local investigators in scattered parts of the country.

Additional Homes Found

A local merchant in the Mid-West, in making up a mailing list from his radio-returns, discovered that more families in a nearby county had listened to and answered his program than were supposedly in the county.

A tabulation of audience mail by names and addresses made by a Southern radio station owner over a 12-month period brought out that his list of set owners was larger in several counties than the number of radio homes attributed to them.

Students canvassing San Diego, Calif., two years ago under the direction of Dr. Broom of San Diego University brought in results which indicated 90 per cent radio ownership whereas the 1930 Census and radio sales in years since then showed only 70 per cent ownership for that city.

Further mystifying reports were turned in when R. L. Polk & Co. began its nation-wide house-to-house survey. Even as far back as the summer of 1932 Polk investigators found 76 out of 100 homes in Seattle owned radios where the "Official" count stood at 60. In 1934 radio-ownership figures compiled by Polk showed 84 per cent or higher for localities as widely separated as Portland, Oregon and Worcester, Mass.

Reasons for Discrepancies

Theories advanced for the discrepancy are two in number. The first was the tax-scare. A proposal for taxation of radio ownership had been made shortly before the Census Takers began their calls in 1930 and wide-spread public concern may have led a large number of radio owners to say "no" to the Census Takers on the question of radio ownership.

The second theory is that of over-conservative figures on new radio homes since 1930 as less than half of all radio set sales since that time have been attributed to new owners. In fact, the 1933 ratio divided sales as follows: 63 per cent replacements, 37 per cent new radio homes. Columbia is of the opinion that the truth lies somewhere in a combination of the two theories.

Revising the nation-wide totals was a big job, but Columbia tackled it in 1934. Thousands of personal calls, proportioned by income levels, time zones and smaller geographic sections were made and members of families interviewed to re-measure radio ownership. To obtain the statistical sample over 125,000 homes were visited.

Results of the check-up completely redesigned the pattern of radio ownership, and discovered the previously uncounted radio owners and listeners.

According to records compiled jointly by Columbia Broadcasting System, McGraw-Hill Publishing Co. and the National Broadcasting Co. 4,084,000 sets valued at $165,000,000 were purchased during 1934. Of this total 1,054,000 were estimated as sales to families who did not previously own radios while 2,250,000 were purchased by radio owners as replacements of old sets or as extra sets.

Automobile owners made up the rest of the figure by purchasing 780,000 sets for their cars.

Norge Shipments Ahead Of First 2 Months of '34

DETROIT — Norge shipments for the first two months of 1935 were 243 per cent of those for the same period of last year, reports President Howard E. Blood of Norge Corp.

Spring Sales Increase In Buffalo Area Dealers Report

BUFFALO — A survey of western New York by the *Buffalo Times* reveals that sales of electric refrigerators in that area are running from 26 to 300 per cent ahead of the corresponding period of 1934, with dealers anticipating even larger gains for the spring and summer season, writes George E. Toles, *Times* financial writer.

There is an air of optimism and confidence throughout the trade, the writer says. Executives report less sales resistance from housewives, who this year are satisfying a long pent-up desire. Heavy replacement demand and a flood of new orders are keeping distributors busy stocking their dealers.

Kelvinator Sales Up 300%

Sales of Kelvinator by Schwegler Bros., Inc., recorded a 300 per cent gain in January over January of 1934. Albert F. Schwegler says "there is a tremendous demand for new models which promises to carry these gains far into the coming year."

Franklin E. Packer, of Erion Bros., Buffalo Frigidaire distributor, expects at least a 40 per cent improvement this spring over last year. Since the first of the year sales have registered a 27 per cent increase over last January and February, he said.

"An augmented program of advertising activities on the part of manufacturers should produce the greatest amount of public interest in refrigerators that there has been in five years," says W. H. Mullett, advertising manager of Frank Wolf, Inc., General Electric distributor. The company's 1935 sales show a 30 per cent gain over last year, with at least a 40 per cent improvement in prospect, he said.

Sales of W. Bergman Co., Norge distributor, are five times their total for the same period of 1934, and Sol J. Levy, vice president, says that dealers are stocking refrigerators this year "because they know they are excellent sales items."

The Ontario Electric Co., distributor for Crosley, has delivered more than four times as many machines thus far in 1935 as it did last year. Joseph L. Block finds the trade "far more receptive than it has been in years."

Sales of Westinghouse units by McCarthy Bros. & Ford, distributor, are running about 40 per cent ahead of 1934, and according to James R. Andrews "the outlook is very promising this year."

Clarence J. Pagel, manager of the Buffalo Grunow Refrigerator Distributor Co., says "people are paying cash this year and taking advantage of the overstocked condition of the trade at the end of 1934." Sales of Grunow show a 15 to 20 per cent increase over last year, and promise to improve "with a betterment of general conditions."

The Apex Refrigerator Sales Co. reports sales for 1935 are 100 per cent ahead of the previous year, with a continuation of this increase in prospect. Robert F. Garrold says "people are certainly more refrigerator-minded this year than ever before, with the result that salesmen are meeting with success at every turn."

Iroquois Gas Co., Buffalo utility, has just received its 1935 Electrolux models, and consequently has not had much opportunity to do a selling job with them. Year end sales of 1934 models, however, were so heavy that the supply was exhausted before the official close of the season.

EARNINGS

Fairbanks-Morse

Fairbanks, Morse & Co., parent organization of Fairbanks-Morse Home Appliances, Inc., and its subsidiaries report a net profit for 1934 of $563,847 compared with a net loss of $1,147,339 for 1933.

The net profit is equal to $8.58 a share on 65,657 $10 par shares of 7 per cent cumulative preferred stock, excluding the treasury stock, on which no payments have been made since Dec. 1, 1931.

Refrigerator Exports for December, 1934

December, 1934, Shipments Reported by the Bureau of Foreign and Domestic Commerce, Washington, D. C.

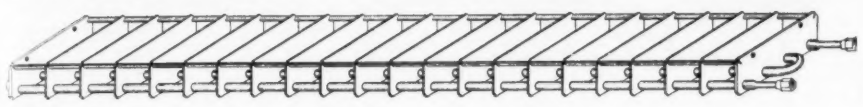
	Electric Household Refrigerators Number	Electric Household Refrigerators Value	Electric Commercial Refrigerators Up to 1 Ton Number	Electric Commercial Refrigerators Up to 1 Ton Value	Parts for Electric Refrigerators Value
Austria	24	$ 1,759	...	...	$ 68
Belgium	72	5,793	55	$ 5,223	4,078
Czechoslovakia	14	542	...	...	1,817
Denmark	...	...	49	3,631	1,341
Finland	4	409	26	2,232	2,685
France	280	16,887	151	12,330	29,322
Germany	210	8,765	...	...	15,313
Gibraltar	...	...	...	...	62
Irish Free State	2	115	2	351	1,808
Italy	55	4,654	2	240	2,460
Netherlands	24	1,811	289	21,757	12,047
Norway	3	310	11	1,589	1,612
Poland and Danzig	2	356	...	...	4
Portugal	9	768	1	71	157
Spain	14	2,244	2	122	1,013
Sweden	25	1,739	39	4,490	4,527
Switzerland	1	53	49	5,095	25,082
United Kingdom	64	3,231	321	18,307	32,610
Yugoslavia	...	...	...	...	31
Canada	103	4,857	10	2,976	15,548
British Honduras	...	...	...	...	23
Costa Rica	5	546	1	445	8
Guatemala	4	369	1	337	144
Honduras	16	1,762	...	...	...
Panama	31	4,521	2	239	446
Salvador	14	1,347	...	...	...
Mexico	47	4,309	2	189	2,170
Newfoundland and Labrador	...	...	...	...	19
Bermudas	9	713	1	325	178
Barbados	15	1,563	1	201	156
Jamaica	9	1,481	3	307	966
Trinidad and Tobago	36	4,511	...	...	235
Other British West Indies	14	1,221	1	717	202
Cuba	68	6,771	8	1,140	1,335
Dominican Republic	19	2,046	...	...	26
Netherland West Indies	24	2,072	4	707	1,117
French West Indies	23	1,811	...	...	34
Haiti, Republic of	13	1,304	...	...	8
Virgin Islands of U. S.	2	227	...	...	28
Argentina	183	10,042	80	4,862	5,410
Brazil	1,496	110,322	56	4,638	16,674
Chile	13	865	...	...	488
Colombia	87	8,110	4	598	392
Ecuador	2	236	...	...	80
British Guiana	26	2,306	...	...	146
Paraguay	12	981	...	...	25
Peru	82	7,940	4	1,500	396
Uruguay	42	3,071	...	...	2,063
Venezuela	93	7,659	3	1,456	211
Aden	...	...	...	...	39
British India	179	16,261	35	3,621	5,782
British Malaya	55	3,915	1	170	827
Ceylon	21	1,453	...	...	847
China	97	9,767	7	1,156	2,023
Netherland East Indies	112	10,066	5	992	1,883
French Indo-China	18	1,125	...	...	856
Hong Kong	23	1,742	...	...	336
Japan	7	1,041	...	...	360
Palestine	16	1,220	1	112	2,064
Philippine Islands	88	8,401	9	4,125	60,859
Syria	3	360	...	...	21
Turkey	6	621	10	1,204	465
Other Asia	2	225	...	...	...
Australia	777	53,386	...	...	20,498
French Oceania	23	1,178	...	...	13
New Zealand	323	24,673	16	991	1,089
Belgian Congo	12	984	...	...	1
British East Africa	6	736	2	298	988
Union of South Africa	1,732	141,319	11	998	8,807
Other British South Africa	...	...	...	...	52
Gold Coast	19	1,567	...	...	105
Nigeria	1	141	...	...	284
Egypt	50	4,727	2	398	313
Algeria and Tunisia	42	3,402	10	1,062	976
Madagascar	4	213	...	...	84
Other French Africa	24	2,471	2	411	174
Italian Africa	5	125	...	...	...
Liberia	3	262	...	...	...
Morocco	3	75	3	870	1,316
Mozambique	44	4,804	...	...	43
Other Portuguese Africa	10	1,522	...	...	50
Canary Islands	2	163	1	53	93
Other Spanish Africa	1	63	...	...	...
Total	**6,999**	**$540,407**	**1,293**	**$112,536**	**$295,213**
Shipments to Hawaii	307	30,662	16	3,152	2,391
Puerto Rico	119	11,487	19	5,827	1,90[illegible]

BUYER'S GUIDE

MANUFACTURERS SPECIALIZING IN SERVICE TO THE REFRIGERATION INDUSTRY

SPECIAL ADVERTISING RATE (this column only)—$12.00 per space.
Payment is required monthly in advance to obtain this special low rate.
Minimum Contract for this column—13 insertions in consecutive issues.

PEERLESS "FREEZER" COILS

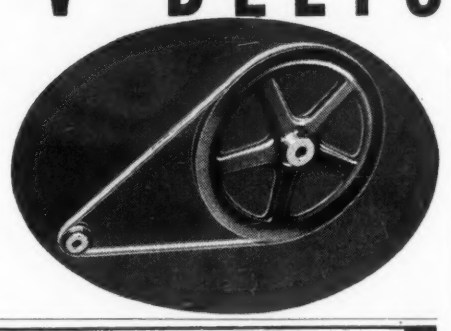


Designed for all BELOW-FREEZING Applications.
A Heavy Duty coil—fins and tubing on 2" centers.
For Chilling Rooms, Ice Cream Hardening and Storage, Freezing Compartments of all types. Especially adapted for water and beverage cooling.
Better and cheaper than plain pipe coils.

PEERLESS ICE MACHINE COMPANY
CHICAGO 515 W. 35th St. — TWO FACTORIES — NEW YORK 43-00 36th St., L.I.C.

DAYTON V•BELTS

There is a Dayton V-Belt made especially for all makes and types of refrigerators, washing machines and other appliances. A stock is available near you. Send for price list and name of your nearest distributor.



THE DAYTON RUBBER MFG. CO.
DAYTON, OHIO
The world's largest manufacturer of V-Belts

RACK'S KOILS KOOL

THE TRADEMARK OF FOUR
PACE SETTERS
IN COIL EFFICIENCY

SUR-E-FEX	Fin Coils
FAN-E-FEX	Diffusing Units
HUM-E-FEX	Non-Dehydrating Coils
AIR-E-FEX	Air-Conditioning Units

SEND FOR NEW CATALOG DESCRIBING THESE SENSATIONAL DEVELOPMENTS
REFRIGERATION APPLIANCES, INC.
H. J. KRACKOWIZER, Pres.
1342 WEST LAKE ST., CHICAGO

Rempe "FIN COIL" Company
Steel—Copper—Aluminum

340 N. Sacramento Blvd.
Chicago, Illinois — Kedzie 0483
Pipe Coils and Bends — Send for catalog, price list and sample
Methyl Chloride, Freon, Sulphur Dioxide and Ammonia

Group Subscription Rates

The following special rates are for PAID-IN-ADVANCE subscriptions only in the United States and Possessions and Pan-American Postal Union Countries. Charge orders are billed at the single-subscription rate, regardless of number. Papers will be mailed to individual addresses.

	Electric Refrigeration News (weekly)	1935 Refrigeration Directory and Market Data Book (2 volumes)	Both Electric Refrigeration News and Refrigeration Directory
1 subscription	$3.00	$5.00	$6.50
5 or more each	2.75	4.50	6.50
10 or more each	2.50	4.00	6.50
20 or more each	2.25	3.50	5.75
50 or more each	2.00	3.00	5.00
75 or more each	1.75	2.50	4.25
100 or more each	1.50	2.00	3.50
For All Other Countries (Except Canada)			
1 subscription	$5.00	$6.00	$9.00
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10 or more each	4.50	5.00	8.00
20 or more each	4.25	4.50	7.50
50 or more each	4.00	4.00	7.00
Canadian Rates (including tariff of 5 cents per copy on the News)			
1 subscription	$6.00	$6.00*	$11.00*
5 or more each	5.75	5.50*	10.50*
10 or more each	5.50	5.00*	10.00*
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*Canadian subscribers are required to pay a tariff and excise tax on the Directory and Market Data Book which amounts to $2.59. These extra charges on books will be collected by the Canadian postoffice at the time of delivery.

Subscription Order

Business News Publishing Co.
5229 Cass Ave., Detroit, Mich. Date.....

☐ Enter my subscription to Electric Refrigeration News for one year (52 issues).
☐ Send the 1935 Refrigeration Directory and Market Data Book (2 volumes).
☐ Enclosed find remittance. (See rates above.)

Name .....

Attention of
In Care of .....

Street Address .....City and State.....

We sell the .....refrigerator and .....
(Please indicate other products or principal line of business.)
3-20-35.

QUESTIONS

List of Service Men

No. 2126 (Manufacturer, Illinois)—"We have a distributor on our refrigeration fittings and valves in Iowa who has asked us to furnish him with a list of the dealers and service men in the states of Iowa, Illinois, and Wisconsin.

"Do you know where we can obtain such a list? Possibly you have one to send us."

Answer: We are now preparing a list of independent service companies for inclusion in the 1935 REFRIGERATION DIRECTORY, which will be completed in a few days.

There is no published list of electric refrigeration dealers.

Addresses

No. 2127 (Manufacturer, Indiana)—"Will you please advise us at once the address of Refrigeration Appliances, Inc., who make fin type coils, also advise the name and address of the company who make the Curtis condensing unit, and the address of Briggs & Stratton who manufacture a gasoline engine driven condensing unit."

Answer: Refrigeration Appliances, Inc. is located at 1342 W. Lake St., Chicago; Curtis Refrigerating Machine Co. should be addressed at 1936 Kienlen Ave., St. Louis, Mo.; and Briggs & Stratton Corp. is located at 2711 N. 13th St., Milwaukee, Wis.

Coldspot Specifications

No. 2128 (Manufacturer, Illinois)—"I have a copy of your 1934 REFRIGERATION DIRECTORY, and note that specifications of the 'Coldspot' refrigerator are not included. I am curious as to why, and if you have these specifications I would appreciate it if you will send me a copy."

Answer: "Coldspot" specifications were not included in the 1934 REFRIGERATION DIRECTORY as the information was not received in time for publication. They were subsequently received and published on page 13 of the July 11, 1934 issue of ELECTRIC REFRIGERATION NEWS. Specifications of Coldspot's 1935 line appear in this issue.

Service News

No. 2129 (Dealer, Minnesota)—"I am in the heating business and want to take on electric refrigeration service and repair work. Have you a paper that will give me the news and places I can buy repair parts and replacement parts."

Answer: Reliable manufacturers of parts for electric refrigerators advertise in ELECTRIC REFRIGERATION NEWS. Complete lists of manufacturers of refrigeration parts will be published in the 1935 REFRIGERATION DIRECTORY AND MARKET DATA BOOK, which will be ready for distribution in the very near future.

Service Manual

No. 2130 (Service man, Pennsylvania)—"Will you also please advise if your service man's manual is ready for distribution yet and what the price is."

Answer: See below.

No. 2131 (Service man, Montana)—"I am informed that you have for sale a service manual on modern electric refrigerators.

"Will you please give me more information on this manual such as price, contents, etc?"

Answer: See below.

No. 2132 (Service man, Minnesota)—"Do you have books for the refrigeration service or repair man that will give data in such shape that if we want to replace a chilling unit or condensing unit or put a new one in a new domestic box or commercial counter we can get it from the book instead of figuring it out."

Answer: We are actively working on plans for a master service manual, but at the present time we cannot make a definite announcement regarding it.

Insulating Paper

No. 2133 (Exporter, New York)—"We are interested in obtaining information, samples and prices for export on insulating paper similar in composition to the Ruberoid brand, which American manufacturers are using to insulate the cork panel in their refrigerators.

"Please be kind enough to advise the names and address of manufacturers who can give this information."

Answer: Paper insulation materials are manufactured by the following companies:

Air-O-Cel, Inc.
714 Stephenson Bldg., Detroit, Mich.
Container Corp. of America
900 Ogden Ave., Chicago, Ill.
Detroit Paper Products Co.
5800 Domine St., Detroit, Mich.
Hinde & Dauche Paper Co.
306 Decatur St., Sandusky, Ohio.
Kimberly-Clark Corp., Neenah, Wis.
Scutan Co., Inc.
233 Broadway, New York, N. Y.
Simplex Paper Co.
Trent Road, Adrian, Mich.

We suggest that you communicate directly with the above-mentioned manufacturers for information, samples, and prices.

Advertising Costs

No. 2134 (Sales counselor, Michigan)—"Can you tell me the total amount spent annually for the last five years on copy by domestic electric refrigerator manufacturers? What percentage on National magazine copy, and what percentage on newspaper copy?

"Have you any approximate idea of the total amount spent on advertising by manufacturer, distributor, and dealer?"

Answer: National magazine advertising expenditures by refrigeration manufacturers for the years 1928 through 1933 were published on pages 630 through 637 of the 1934 REFRIGERATION DIRECTORY AND MARKET DATA BOOK. National magazine advertising expenditures by manufacturers in 1934 will be published in the next issue of ELECTRIC REFRIGERATION NEWS.

This information will be correlated in the 1935 REFRIGERATION MARKET DATA BOOK, now being prepared.

We have no breakdown showing a comparison between amount spent in magazines and newspapers, or do we have a record of the total amount spent by manufacturers, distributors, and dealers for advertising.

Sales by Makes

No. 2135 (Service man, Illinois)—"Please advise me whether you can furnish information concerning sales volume of different makes of refrigerators in 1934 and state price of this information."

Answer: We are unable to give you the number of household electric refrigerators sold by each of the various individual manufacturers during the year 1934. Fourteen of the largest manufacturers of household electric refrigerators report their sales figures to the Refrigeration Division of National Electrical Manufacturers Association (Nema) and only the total are released to us. Nema monthly figures are published in ELECTRIC REFRIGERATION NEWS as soon as received.

During 1934, ELECTRIC REFRIGERATION NEWS has estimated that industry manufacturers' sales to distributors and dealers throughout the world totaled approximately 1,390,000 household electric refrigerators.

Steel Cabinets

No. 2136 (Engineer, New York)—"Would you please give me the names of a few steel cabinet makers (empty domestic cabinets)."

Answer: Some manufacturers of household refrigerator cabinets listed in the 1935 DIRECTORY are as follows:

Seeger Refrigerator Co.
Arcade, Wells & Whitehall Sts.
St. Paul, Minn.
Leonard Refrigerator Co.
14260 Plymouth Rd., Detroit, Mich.
Modern Refrigerator Co., Inc.
494 Dumont Ave., Brooklyn, N. Y.
Erie Art Metal Co.
18th & Schaal Ave., Erie, Pa.
Rex Mfg. Co., Inc.
Western Ave., Connersville, Ind.
Sanitary Refrigerator Co.
Fond du Lac, Wis.
Truscon Steel Co., Cleveland, Ohio.
Crystal Refrigerator Co.
850 W. Fourth St., Fremont, Nebr.

Frankel's Letter

No. 2137 (Manufacturer, Illinois)—"In a recent issue of your publication you published a letter from Mortimer Frankel of Fairbanks-Morse Home Appliances, Inc., which was an answer to someone's letter concerning the insulation of the Fairbanks-Morse refrigerator.

"Since I do not have complete copies of your publication, will you please find out the date of this issue."

Answer: Mr. Frankel's letter was published on the editorial page of the Jan. 2 issue of the NEWS.

TRAINING MEN . . . that's our business

For 9 years we have been training men for positions in the refrigeration field . . . "readying" them so the kind of men the industry needs will be available when and where they are needed. We know the kind of training a man requires to succeed in refrigeration work. That is the kind of training we give. In addition to benefiting the man, we believe it benefits the industry as a whole.

UTILITIES ENGINEERING INSTITUTE
404 N. Wells St. — Chicago, Ill.
Inquiries Solicited from Those Desiring Personal Training or the Services of Trained Men

CLASSIFIED

RATES: Fifty words or less, one insertion $2.00, additional words four cents each. Three insertions $5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Electric Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS AVAILABLE

EXPANSION program makes immediate connection available for high grade regional manager to appoint distributors and dealers on our nationally known line of commercial refrigerator equipment and assist the distributors and dealers in building selling organization.

Here is the kind of man we want—experienced in domestic or commercial refrigeration—preferably man who has traveled for one of the major ice machine manufacturers appointing distributors or man who has worked for a distributor in building dealer organization—successful personal selling record, experience in hiring and training men on major specialties and understands the psychology of attracting and enthusing men to go out and work—age 35 to 45—must have good appearance and good health—have car and be in position to travel.

To the man who can qualify we make weekly draw and expense advance against bonus on sales. This connection offers remuneration big enough to interest highest class man, is permanent and offers big possibilities for future advancement. The successful applicant will receive complete factory training.

If you have the above qualifications, a dynamic, forceful personality with unlimited enthusiasm and your previous record will stand a searching investigation, write giving full details. Holcomb and Hoke Mfg. Co., 1545 Van Buren St., Indianapolis, Ind.

SERVICE MAN wanted for small town, fifty miles from New York City, to service Petro oil burners and Kelvinator Refrigerators. Must know both lines thoroughly; state experience and salary. Box 689, Electric Refrigeration News.

POSITIONS WANTED

SALES Promotion Manager, also experienced as territorial representative, wants to connect with manufacturer, utility or responsible distributor in sales capacity. Experience includes recruiting distributors and dealers, training their sales forces, planning their advertising and stimulating their promotional and sales efforts. Handled domestic, commercial, air conditioning, and ranges to utilities, department store and other types of outlet. Box 688, Electric Refrigeration News.

SALES EXECUTIVE with many years of successful factory and jobbing experience, particularly refrigeration, radio, and air conditioning, is desirous of corresponding with manufacturers who might be interested in the services of one who understands wholesale and retail merchandising thoroughly. At present employed. Will consider locating anywhere. Replies confidential. Box 685, Electric Refrigeration News.

PARTS & SUPPLIES

WHOLESALE Refrigeration Supply Parts—Indiana's most complete stock. Representing Kerotest valves and fittings, Brunner and Lipman compressors, Peerless fin coils, Penn and Detroit controls, Virginia Smelting SO_2 and methyl chloride gas, Gilmer belts, Dehydrated tubing, Marsh gauges, Chase sweat fittings, Oil, draft beer supplies, etc. F. H. Langsenkamp Co., 231 E. South St., Indianapolis, Ind.

EQUIPMENT FOR SALE

ISOBUTANE: Help us bring Isobutane prices down to proper level. We offer purest, dryest, and highest quality Isobutane obtainable; in your 80 lb. cylinders at $.75, in our 120 lb. cylinders, $.70, in small lots $1.00 per pound. The Standard Refrigeration Company of Pittsburgh, 1148 Dohrman St., McKees Rocks, Pa.

REPAIRS

HALECTRIC thermostat repair service. B & B, G.E., Cutler-Hammer, Penn, Ranco, Tag., etc. Expansion valves repaired. Gas service, Ethyl, Methyl, Iso-Butane, Sulphur. Your cylinder or ours. Competitive prices. Halectric Laboratory, 1793 Lakeview Road, Cleveland, Ohio.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. Van Deventer (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

CURTIS REFRIGERATION
Commercial & domestic units, 1/6h.p.—15h.p.
Distributor franchises available. Write to:
CURTIS REFRIGERATING MACHINE CO.
Division of Curtis Manufacturing Company
1912 Kienlen Ave., St. Louis, Mo.

TEMPRITE
INSTANTANEOUS
BEER and WATER COOLERS
DETROIT MICHIGAN